COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL COMMISSION

REGULATION NO. 72

CHERRY CREEK RESERVOIR CONTROL REGULATION

5 CCR 1002-72

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72.1 AUTHORITY

The Water Quality Control Commission is authorized to promulgate this Control Regulation pursuant to sections 25-8-202(1)(c) and 25-8-205, C.R.S.

72.2 DEFINITIONS

See the Colorado Water Quality Control Act and other Water Quality Control Commission regulations for additional definitions.

1. "Authority" means the Cherry Creek Basin Water Quality Authority established pursuant to section 25-8.5-101, et seq., C.R.S.

2. "Background sources" include loading to the reservoir that is not the result of human-related activities, such as groundwater in its natural condition and precipitation on the reservoir.

3. "Best management practice (BMP)" means the best schedules of activities, prohibitions or practices, operation and maintenance procedures, and other management practices to prevent or reduce the introduction of pollutants into state waters. Best management practices include, but are not limited to, structural and nonstructural controls, treatment requirements, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. Best management practices can be applied before, during, and after pollution-producing activities.

4. "Cherry Creek watershed" consists of all lands that drain into the following: (a) the mainstem of Cherry Creek, from the source of East and West Cherry Creek to the inlet of Cherry Creek Reservoir (Segment 1), including alluvial groundwater; (b) Cherry Creek Reservoir (Segment 2), including alluvial groundwater; and (c) all tributaries to Cherry Creek, including all lakes, reservoirs, wetlands, and alluvial groundwater, from the sources of East and West Cherry Creeks (parts of Segment 4) as described in the Classifications and Numeric Standards – South Platte River Watershed, Regulation No. 38 (5 CCR 1002-38). The Cherry Creek Watershed is delineated in Figure 1 attached to this regulation.

5. "Designated water quality management agency" means the agency identified by the Denver Regional Council of Governments Metro Vision Clean Water Plan and by the Governor to implement specific control recommendations.

6. "Direct discharge" means any discharge to any surface waters or subsurface waters, including discharge from rapid infiltration basins, related to Cherry Creek or its tributaries, except by land disposal or land treatment. “Direct discharge” does not include discharges from regulated stormwater sources.

7. “Disturbed areas” means any site, area or lands in the Cherry Creek watershed where a land disturbance has commenced but has not been permanently stabilized and/or revegetated.

8. “Division” means the Water Quality Control Division of the Colorado Department of Public Health and Environment.

9. "Effluent limitation" means any restriction or prohibition established pursuant to this regulation, the Colorado Water Quality Control Act, or the federal act on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into state waters, including, but not limited to, standards of performance for new sources, toxic effluent standards, and schedules of compliance.

10. “Individual home construction” means any land disturbance or development for a single home, not including land disturbances for roads, road gutters or road improvements, that disturbs less than one acre of land and where the Owner of the single home holds a permit for construction of only one dwelling within the subdivision, if any, containing the single home.

11. "Individual sewage disposal system" means a system or facility for treating, neutralizing, stabilizing, or disposing of sewage that is not a part of or connected to a wastewater facility, as defined in this section.

12. ”Industrial process wastewater sources” include, but are not limited to, facilities, or activities that discharge non-domestic process wastewater, such as effluent from construction dewatering and sand and gravel mining. “Industrial process wastewater sources” do not include facilities or activities that discharge into a wastewater facility, as defined in this section. For the purpose of this regulation only, such sources also do not include such activities as hydrostatic testing operations, construction dewatering, treated water distribution systems and water treatment backwash, dewatering or foundation draining, and swimming pool drainage.

13. "Land application" is any discharge being applied directly to the land for land disposal or land treatment and does not include discharges to surface waters, even if such waters are subsequently diverted and applied to the land.

14. “Land application return flow factor" means the return flow factor for land application sites in an augmentation plan decreed by the Colorado District Court, Water Division, or, where an augmentation plan has not been decreed, a study similar to that which would be required to support an augmentation plan.

15. "Land disposal" means any discharge of pollutant-containing waters being applied to land for which no further treatment is intended.

16. “Land disturbance” means a man-made change in the natural cover or topography of the land, including grading, cutting and filling, building, paving, excavating and any other activities that may result in or contribute to soil erosion or sedimentation in waters or discharge of pollutants, as identified in section

72.7(2)(b) of this regulation, except individual home construction, as defined in this section.

17. "Land treatment" means any discharge of pollutant-containing waters being applied to the land for the purpose of treatment.

18. “Local government” means a city, town, county, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or a designated and approved management agency under section 208 of the federal Clean Water Act.

19. "Municipal separate storm sewer system” or “MS4" means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):
    (a) owned or operated by a State, city, town, county, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under section 208 of the CWA that discharges to state waters;
    (b) designed or used for collecting or conveying stormwater;
    (c) which is not a combined sewer; and
    (d) which is not part of a Publicly Owned Treatment Works (POTW).

20. "Nonpoint source" means any activity or facility other than a point source from which pollutants are or may be discharged. For the purposes of this regulation, nonpoint source includes all runoff that is not subject to the requirements provided under 5 CCR 1002-61 section 61.3(2)(e), (f), or (g), including those designated by the Division under section 61.3(2)(f)(iii), whether sheet flows or collected and conveyed through channels, conduits, pipes or other discrete conveyances.

21. "Phosphorus Bank" consists of those certain nonpoint source phosphorus pounds removed by BMPs that can be allocated to the entity instituting the nonpoint source project, held as credits for possible future use by the entity instituting the trade, or permanently retired to further protect water quality.

22. “Point source” means any discernible, confined, and discrete conveyance, including but not limited to, and any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. "Point source" includes conveyances of regulated stormwater. “Point source” does not include irrigation return flows.

23. “Process wastewater” means any water, which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product. “Process wastewater” includes any process-generated wastewater from

concentrated animal feeding operations required to obtain a Colorado Discharge Permit System permit

24. “Regulated stormwater” means stormwater discharges to state waters that are from regulated entities; i.e., industrial or commercial facilities, or municipal separate storm sewer systems regulated under 5 CCR 1002-61 section 61.3(2)(e), (f), or (g), including those designated by the Division under section 61.3(2)(f)(iii).

25. "Reserve Pool" consists of those wastewater facility phosphorus pounds available that may be awarded by the Authority to those facilities in the Cherry Creek Watershed pursuant to section 72.5(2).

26. “Semi-urban areas” means potential development areas that are outside the overall urban growth boundary established by the Denver Regional Council of Governments Metro Vision Plan or are assigned urban areas not affiliated with a service provider. These areas have not been included within a designated service area assigned to existing wastewater facilities, which have wasteload allocations as specified in Section 72.4, but are designated planning areas that are planned for urbanization after 20 years.

27. “Stormwater” means stormwater runoff, snowmelt runoff, and surface runoff and drainage.

28. “TMAL” means the “Total Maximum Annual Load” of phosphorus allowed that is intended to result in the attainment of water quality standards for Cherry Creek Reservoir. The TMAL is derived from the sums of the phosphorus loads related to Nonpoint and Regulated Stormwater Sources, Background Sources, Wastewater Facility Sources, Industrial Process Wastewater Sources, and Individual Sewage Disposal Systems plus a Margin of Safety.

29. "Trade ratio" means the number of phosphorus pounds removed by a nonpoint source project required for the award of one (1) phosphorus wasteload allocation pound in the Trading Program.

30. "Trading Program" means the program administered by the Authority for nonpoint to point source phosphorus trading in the Cherry Creek watershed.

31. "Wasteload allocation" means the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution.

32. “Wastewater facility” means a system or facility for treating, neutralizing, stabilizing, or disposing of domestic wastewater which system or facility has a designed capacity to receive more than two thousand gallons of domestic wastewater per day. The term ”wastewater facility” also includes appurtenances to such system or facility, such as outfall sewers and pumping stations, and to equipment related to such appurtenances. The term ”wastewater facility does not include industrial wastewater treatment plants or complexes whose primary function is the treatment of industrial wastes, notwithstanding the fact that human wastes generated incidentally to the industrial processes are treated therein.

33. "Water quality capture volume" means the runoff retention capacity of a BMP that is designed to capture and treat, at a minimum, the 80th percentile runoff event from an entire site, i.e., 80 percent of the most frequent occurring storms are fully captured and treated and larger events are partially treated.

72.3 PHASE 1 TOTAL MAXIMUM ANNUAL PHOSPHORUS LOAD ALLOCATIONS

A total maximum annual load (TMAL) of phosphorus shall be developed for Cherry Creek Reservoir. Activities necessary to reduce the actual phosphorus loads to an amount no greater than the TMAL shall be implemented under a phased approach consistent with EPA guidance. Attainment of the TMAL may require progressive development of point source and nonpoint controls. Additional point source controls regarding wasteload allocations and effluent limitations are specified in Section 72.4, and the construction of nonpoint source control projects is specified in Section 72.6(1)(c). Continued water quality monitoring, specific modeling, and special investigative studies will be conducted to complete this first phase. This Phase 1 TMAL will implement further controls on point sources, stormwater, and nonpoint sources while sufficient information on the phosphorus loadings to the watershed and reservoir are developed to support revision of the TMAL.

1. The following annual cumulative mass loads of phosphorus to the Cherry Creek Reservoir as shown below shall not be exceeded. In no event shall these allocations be construed to allow discharges in excess of the requirements of sections 72.4 and 72.6 of this regulation for the total phosphorus load.

2. The total maximum annual load for total phosphorus by sources is based on the formula of TMAL = Nonpoint and Regulated Stormwater Sources + Background Sources + Wastewater Facility Sources + Industrial Process Wastewater Sources + Individual Sewage Disposal Systems + Margin of Safety. The TMAL phosphorus poundage allocations are distributed among the sources as follows:

Allocation Type	Total Phosphorus Pounds/Year
Nonpoint and Regulated Stormwater Sources:	10,290 lbs./yr[1]
Background Sources:	1,170 lbs./yr
Wastewater Facility Sources (Including Reserve Pool and Phosphorus Bank):	2,310 lbs./yr
Industrial Process Wastewater Sources:	50 lbs./yr
Individual Sewage Disposal Systems:	450 lbs./yr
Total Maximum Annual Phosphorus Load:	14,270 lbs./yr

3. Any phosphorus poundage awarded to wastewater facility and industrial process wastewater dischargers through the Trading Program specified in section 72.5(3) shall not result in the exceedance of the allocations specified above.

4. The future activities by year to provide reasonable progress in attaining water quality standards and support revisions to the TMAL are identified below. The

1 Cherry Creek Reservoir modeling identified nonpoint source loads of 10,290 pounds of phosphorus at a nonpoint source and stormwater inflow of 10,997 acre feet per year. These values were based on a methodology that determined phosphorus loading and runoff volume according to land use for the year 2000. DRCOG Cherry Creek Basin Water Quality Management Master Plan, Technical Report, 1985.

construction of any nonpoint source control projects shall be consistent with the requirements in Section 72.6(1). The Authority shall implement these activities, as allowed by applicable funding levels, for review by the Division and Commission at the next triennial review. The activities shall include, but are not limited to, the following items:

(a) Year One

(1) Construction of nonpoint source control projects;

(2) Reservoir nutrient enrichment studies;

(3) Further development of event mean concentration for stormwater flows;

(4) Further quantification of soil and ground water background phosphorus levels; and

(5) Identification of industrial process wastewater sources and associated phosphorus loading.

(b) Year Two

(1) Construction of nonpoint source control projects;

(2) Evaluation of phosphorus removal effectiveness of nonpoint source control structures;

(3) Monitoring of shallow alluvial ground water loading in tributaries; and

(4) Quantification of individual sewage disposal system phosphorus loading.

(c) Year Three

(1) Construction of nonpoint source control projects to reduce phosphorus loading to the maximum extent practicable;

(2) Implementation of lower phosphorus effluent limits;

(3) Characterization of watershed hydrology to establish reference condition for evaluation of phosphorus loading;

(4) Depth profiling of nutrient content for ground water;

(5) Revised calculations of background sources, industrial process wastewater sources, and individual sewage disposal systems sources of phosphorus contributions; and

(6) Revision of control regulation TMAL for next triennial review.

72.4 WASTEWATER FACILITY WASTELOAD ALLOCATIONS AND EFFLUENT LIMITATIONS

1. The Division shall not issue discharge permits to the following wastewater facilities and industrial process wastewater sources that allow effluent limitations exceeding the phosphorus allocations below, unless such exceedances consist solely of phosphorus pounds awarded from the Reserve Pool or authorized by temporary transfers. However, in no event shall these allocations be construed to allow discharges in violation of the requirements of section 72.4, subject to approved trades pursuant to Section 72.5(3).

2. The annual wasteload allocation of phosphorus in the Cherry Creek Watershed is limited to 2,360 lbs./yr, allocated among the wastewater facilities, industrial process wastewater sources, and developing areas existing as of June 30, 2001, as follows:

FACILITY		LBS./YR[2]
ACWWA/Cottonwood Water and Sanitation District[3]		402
Denver Southeast Suburban Water and Sanitation District		304
Inverness Water and Sanitation District		129
Meridian Metropolitan District		113
Parker Water and Sanitation District		533
Stonegate Center Metropolitan District		161
Semi-urban Areas		236
Industrial Process Wastewater Sources		50
	Subtotal	1,928
Reserve Pool		216
Phosphorus Bank		216
	Total	2,360

3. Every wastewater facility and industrial process wastewater source must obtain a sufficient phosphorus wasteload allocation prior to commencing discharges into the Cherry Creek watershed. Expanded or new wasteload allocations shall be taken from the Reserve Pool pursuant to Section 72.5(2), from the Phosphorus Bank pursuant to 72.5(3), or from the Semi-urban Areas category. Wasteload allocations for direct discharges must be sufficient for the annual loading resulting from a discharge at the design hydraulic capacity and a discharge concentration of 0.05 mg/l total phosphorus or less. Wasteload allocations for land application discharges must be sufficient for the annual loading using the product of the design flow and the land application return flow factor and a

2 The above wasteload allocations for the listed wastewater facilities are not deemed to be the grant of a property right for any number of phosphorus pounds, and such allocations may be changed by the Commission upon good cause shown during regular reviews of this regulation.

3 The Cottonwood Water and Sanitation District (Cottonwood) and Arapahoe County Water and Wastewater Authority (ACWWA) have entered into an intergovernmental agreement under which the Cottonwood wastewater flows are treated at the ACWWA wastewater treatment facility. The previous Arapahoe Water and Sanitation District and Cottonwood wastewater service areas were consolidated into a single ACWWA wastewater service area in the Clean Water Plan.

discharge concentration of 0.05 mg/l total phosphorus or less. New or increased wasteload allocations from the Reserve Pool shall only be made in accordance with a trade completed pursuant to Section 72.5.2(a).

4. Notwithstanding the wasteload allocations specified in section 72.4(2), by no later than August 1, 2004, no direct discharger within the Cherry Creek watershed shall discharge an effluent with a total phosphorus concentration greater than 0.05 mg/l total phosphorus as a 30-day average. By no later than August 1, 2004, no dischargers using land application shall discharge a 30-day flow-weighted average phosphorus concentration at any site that is greater than 0.05 mg/l total phosphorus divided by the land application return flow factor.

5. Whenever a discharger requests a compliance schedule in connection with a permit issuance or permit renewal, the discharger shall (on the same date) notify the Authority of that request, solicit Authority comments, and submit evidence of that notice to the Division. The Division shall not take final action on any compliance schedule until Authority comments are received or 45 days after the date that notice was provided to the Authority, whichever occurs first. This provision shall not apply in the case of minor modifications to permits as defined by section 61.8(8)(e), 5 CCR 1002-61.

6. Allocation of phosphorus from the wasteload allocation for Semi-urban Areas may be made to new wastewater facilities serving areas within the urban growth boundary shown in the DRCOG Metro Vision Clean Water Plan. Allocation of phosphorus from the wasteload allocation for Semi-urban Areas may also be made to an existing wastewater facility that is accepting wastewater from new development outside of its service area, but within the planning area for another entity. Where the growth to be served is outside of the service area of another entity, the Authority may grant an allocation upon receipt of a letter from DRCOG that confirms that the proposed area has been incorporated into the urban growth boundary.

7. For all wastewater facilities, the monthly and annual quantity of total phosphorus discharged shall be determined as follows:

   (a) For each direct discharge outfall and for each land application site with a distinct land application return flow factor, monthly phosphorus loads (pounds of total phosphorus) contributed shall be determined based upon the following formula:

Monthly Phosphorus Load (Pounds) = Monthly volume discharged (million gal) x Phosphorus Concentration (mg/l) x 8.34

   (1) For wastewater facilities utilizing land application, the monthly volume discharged shall be calculated by the following formula:

Monthly Volume Discharged (Million Gallons (MG)) = Sum of (Volume applied to each site (MG) x respective land application return flow factor)

   (2) For direct discharge wastewater facilities, the monthly volume shall be the total volume of effluent (in MG) measured at each outfall.

(b) Phosphorus concentrations for each direct discharge and land disposal site will be calculated by the following formula:

$$\text{Phosphorus Concentration (mg/l)} = \frac{\text{Sum of the concentrations of all samples (mg/l as P) for the outfall or land app. site for the month}}{\text{The number of samples collected and analyzed for that month}}$$

(c) The annual phosphorus wasteload shall be the sum of the monthly phosphorus loads for each direct discharge outfall and land application site calculated for that calendar year and shall not exceed the wasteload allocations set forth in section 72.4(2).

8. ADDITIONAL PROHIBITIONS AND PRECAUTIONARY MEASURES

If controls on phosphorus contributions from point sources are not effective in reducing phosphorus loads and attaining water quality standards, the Commission may consider the adoption of prohibitions or precautionary measures to further limit phosphorus loading, including but not limited to, the following potential phosphorus sources:

(a) Hydrostatic testing operations;

(b) Construction dewatering;

(c) Treated water distribution systems and water treatment backwash;

(d) Dewatering or foundation draining; and

(e) Swimming pool drainage.

72.5 POINT SOURCE WASTELOAD ALLOCATION MODIFICATIONS

1. TEMPORARY TRANSFER OF PHOSPHORUS ALLOCATIONS

(a) The Authority is authorized, upon request by an applicant, to approve a temporary transfer of all or a portion of a wastewater facility's annual allocation of phosphorus for a given year or years.

(1) In determining whether to approve a temporary transfer of all or a portion of a facility's annual allocation of phosphorus, the Authority shall consider, in addition to other factors, the following:

(i) whether such transfer is agreed to by both the transferring and the receiving wastewater facilities; and

(ii) whether the receiving discharger has taken or is committed to take all reasonable interim steps to decrease, to the extent practicable, the total phosphorus loading;

(b) The transfer of the phosphorus allocation shall become effective upon the Authority's final decision, subject to appeal as provided in section 72.5(4).

(c) No discharge based upon the transfer of the phosphorus allocation shall be permitted until the applicant's discharge permit is amended, as appropriate, by the Division.

(d) All temporary transfers of phosphorus shall be reviewed at the triennial review of this regulation to determine if the wasteload allocation requires revision.

2. RESERVE POOL

(a) A Reserve Pool shall be retained as a means of granting phosphorus wasteload allocations to new or existing wastewater facilities or industrial process wastewater sources that have completed a nonpoint phosphorus trade project in accordance with the relevant provisions of section 72.5(3), or that have extended wastewater service to semi-urban areas. Award of an allocation of phosphorus from the Reserve Pool shall reduce the amount of phosphorus credited in the Reserve Pool by an amount equal to the allocation provided to the point source. Trades upon credits established in the Phosphorus Bank in accordance with section 72.5(3)(h) shall result in a reduction or retirement of credits in the Phosphorus Bank. Allocation of phosphorus from the Reserve Pool must meet the requirements of Section 72.4.

(b) The Authority is authorized, upon request by an applicant supported by sufficient information, to allocate phosphorus from the Reserve Pool to a new or existing discharger. In determining whether to allocate phosphorus from the Reserve Pool, the Authority shall consider a comparative assessment of the need of the discharger, the present and future needs of other facilities in the Cherry Creek watershed, and the present and future availability of phosphorus allocations for point source discharges.

(c) The allocation of phosphorus from the Reserve Pool shall become effective upon the Authority's final decision, subject to appeal as provided in section 72.5(4).

(d) No discharge based upon the phosphorus allocation from the Reserve Pool shall be permitted until the applicant obtains a discharge permit or amendment to its discharge permit, as appropriate, from the Division.

3. TRADING PROGRAM

(a) In furtherance of attaining the chlorophyll a standard, the Authority is authorized to implement and maintain a trading program for the Cherry Creek watershed that allows credits from certain nonpoint source projects to be allocated to point source dischargers, or to be held as credits in a Phosphorus Bank for allocation in the future. The trading program shall not result in an exceedance of the total maximum annual phosphorus load as specified in section 72.3(2).

(b) Nonpoint source projects funded by the Authority shall not be eligible for trading.

(c) Municipal water supply operations that may have an incidental benefit of reducing phosphorus loading shall not be eligible for trading. Other activities that may reduce phosphorus loading beyond that which would occur as a result of the normal development and operation of such a project shall be eligible for trading.

(d) Credits for phosphorus trading shall be determined initially upon site-specific monitoring data or best available scientific evidence of similar types of projects that characterize the representative annual phosphorus loading reduction achieved by the nonpoint source project.

(e) Trades will be limited to the three following types of nonpoint source projects:

(1) existing developed areas for which BMPs were not constructed during the original development activities;

(2) existing required BMPs that are retrofitted or expanded to achieve a higher level of phosphorus removal; or

(3) BMPs for new development that demonstrate phosphorus reduction greater than that resulting from the implementation of the BMPs required in Section 72.7 through provision of additional physical or chemical processes, or through enhanced operational or maintenance procedures.

(f) The Authority may approve trading program projects described in section 72.5(3)(e) in accordance with this section 72.3(3), and 72.4(6). Credits from such projects may be assigned as follows:

(1) a credit to the entity instituting the nonpoint source project for immediate use, or

(2) a credit may be held in the Phosphorus Bank for possible future use by the entity instituting the trade, or

(3) a credit may be permanently retired to further protect water quality.

(g) The minimum ratio to be utilized in calculating nonpoint source to point source trades shall be 2 pounds of nonpoint source phosphorus removed for 1 pound of point source phosphorus discharged. Prior to determining the final trade ratio, individual trades shall be subject to adjustments in order to assure that:

(1) the relative load of dissolved and particulate phosphorus between the nonpoint source from which the load is reduced and the point source that receives the credit is comparable;

(2) the fate and transport characteristics (e.g. chemical and physical transformations and time of travel) of the reduced and controlled phosphorus to be traded from a nonpoint source project are similar or pose a greater risk of impact upon the reservoir than the phosphorus loading to be discharged from the point source receiving the credit. The phosphorus trading ratio can be adjusted up to 3:1 when the point source discharge is further away from the reservoir than the nonpoint source project location.

(h) The Authority's approval of nonpoint source to point source trades, and the determination of the amount of credit, shall be based upon the following criteria:

(1) consistency with this control regulation;

(2) net effect on water quality in the Cherry Creek watershed;

(3) completeness and technical soundness of the project;

(4) submittal of the operations and maintenance requirements to assure continuous control;

(5) anticipated treatment efficiency of the facility to be awarded the credit;

(6) submittal of a monitoring plan that characterizes and evaluates the annual phosphorus loading reduction;

(7) compliance with discharge permit effluent limitations by the facility to be awarded the credit; and

(8) evaluation and comments from the Division.

(i) The Authority shall maintain a Phosphorus Bank for use by entities that have either gained approval for a trade that will not be utilized at the time the nonpoint source project is completed, or completed a project as defined in 72.5(3)(d) for which a trade has not yet been proposed. An entity that has a credit in the Phosphorus Bank may choose to release the credits for assignment by the Authority to another entity based upon the following criteria:

(1) the requirements in 72.5.3(f) listed above;

(2) a calculation of the trade ratio as required in 72.5.3(~~f~~);

(3) an agreement between the entity placing the pounds in the Phosphorus Bank and the entity receiving the pounds recognizing the arrangement; and

(4) approval of the trade by the Authority.

(j) The use of any revenue received by the Authority from the sale of pounds of phosphorus out of the Phosphorus Bank shall be restricted to use for activities required by this control regulation.

(k) Retention of credits in the Phosphorus Bank shall be based on continued demonstration of the performance of the nonpoint source project as based on the monitoring plan in Section 72.5(3)(h)(6). The Authority shall retain the right to modify or revoke a trade based on compliance with the requirements specified in Section 72.5(3)(h).

(l) Phosphorus allocations awarded pursuant to the Trading Program, and all Authority decisions regarding trades, shall be effective upon the Authority's final decision, subject to appeal as provided in section 72.5(4). No discharge of phosphorus allocated from the Phosphorus Bank under the Trading Program shall be permitted until the applicant's discharge permit is amended, as appropriate, by the Division.

(m) In future revisions to this control regulation, that may be necessary to attain the chlorophyll a standard, the Commission may reallocate or reduce phosphorous credits from the Phosphorus Bank, as well as from the allocations for phosphorus sources in the watershed, where monitoring demonstrates that the performance of nonpoint source projects have not met these minimum requirements.

4. ADJUDICATORY HEARINGS

(a) Any person adversely affected or aggrieved by a final decision of the Authority on temporary transfers pursuant to section 72.5(1) or on awards of phosphorus pounds from the Reserve Pool pursuant to section 72.5(2) may request an adjudicatory hearing before the Commission under the requirements and procedures of section 21.4, 5 C.C.R. 1002-21. Decisions in such adjudicatory hearings shall be based upon the criteria enumerated in this Control Regulation.

(b) Any person adversely affected or aggrieved by a final decision of the Authority on assignment of phosphorus pounds to the Phosphorus Bank, on awards of phosphorus pounds from the Phosphorus Bank, or on trades involving individual nonpoint source projects under the Trading Program in section 72.5(3), may request an adjudicatory hearing before the Commission under the requirements and procedures of section 21.4, 5 C.C.R. 1002-21. Decisions in such adjudicatory hearings shall be based upon the Authority's decision-making criteria set forth in section 72.5(3).

(c) All adjudicatory hearings under this section shall be conducted in accordance with the provisions of sections 24-4-105 and 25-8-401 et seq., C.R.S. Unless otherwise provided, all requests for adjudicatory hearings under this section must be made in writing no later than thirty (30) days after the final decision of the Authority.

72.6 NONPOINT SOURCE NUTRIENT CONTROLS

During Phase 1 of the TMAL, the nonpoint source nutrient controls identified in sections 72.6(1) through 72.6(2) below shall be implemented.

1. NONPOINT SOURCE BEST MANAGEMENT PRACTICES

a) Local governments, individuals, corporations, partnerships, associations, agencies, or other entities with responsibility for activities or facilities that cause or could reasonably be expected to cause nonpoint source pollution of waters in the Cherry Creek Watershed shall adopt and implement best management practices to the maximum extent practicable to reduce nutrient loading from such sources.

(b) The choice of nonpoint source control measures shall be made by such local governments, individuals, corporations, partnerships, associations, agencies, or other entities, either individually or jointly. Entities with responsibility for existing flood and drainage control facilities shall consider application of nonpoint source best management practices for those facilities.

(c) A prioritized list of future nonpoint source control projects designed to permanently reduce phosphorus loading, including a schedule for construction, shall be developed by the Authority and submitted to the Division by September 2001. These projects will be compiled based upon the most effective and/or cost efficient projects in terms of removing phosphorus. The list of projects and schedule may be updated as necessary when new information becomes available.

(d) The Authority shall provide for the long-term operation and maintenance of Authority nonpoint source projects, and individual nonpoint source projects shall be operated and maintained by project owners, with oversight from the Authority.

(e) The Division shall collaborate with owners/operators of agricultural or silvicultural facilities in the Cherry Creek Watershed in pursuing incentive, grant, and cooperative programs to study and control nonpoint source pollution related to agricultural and silvicultural practices. Pursuant to section 25-8-205(5), C.R.S., the Commission may consider adopting, in consultation with the commissioner of agriculture, control regulations specific to agricultural and silvicultural practices if the Commission determines that such programs are inadequate and that control regulations are necessary to attain water quality standards in the reservoir.

(f) The Division shall collaborate with local governments in the Cherry Creek watershed to encourage connection of existing individual sewage disposal systems and new development to central wastewater facilities in an effort to reduce nutrient loading from individual sewage disposal systems.

2. PUBLIC INFORMATION AND EDUCATION

a. The Authority is identified by the DRCOG MetroVision 2020 Clean Water Plan as the designated water quality management agency for the Cherry Creek watershed. The Authority shall develop and implement a public information and education program in addition to the requirements in section 72.7(2)(a)(1). This program will focus on the abatement of known water quality impairments resulting from nonpoint source pollution, and the prevention of significant threats to water quality from present and future activities. Areas for abatement include, but are not limited to, general agricultural and silvicultural practices, individual sewage disposal systems, large lot development (>1 acre), and other potential nutrient sources.

b. The Authority shall consult with the Division and other interests in developing the program. The program will be consistent with the voluntary, incentive-based approach and focus on the general public, work force, and local government sectors within the Cherry Creek watershed. The program shall be implemented by June 1, 2002.

3. NONPOINT SOURCE PHOSPHORUS ALLOCATION ADJUSTMENT

If voluntary controls on phosphorus contributions from nonpoint sources are not effective in reducing phosphorus loads and attaining water quality standards after evaluating the progress of the Phase 1 TMAL, the Commission may adjust the phosphorus allocations outlined in sections 72.3 and 72.4 of this Regulation to further limit phosphorus loading.

4. ADDITIONAL PROHIBITIONS AND PRECAUTIONARY MEASURES

If voluntary controls on phosphorus contributions from nonpoint sources are not effective in reducing phosphorus loads and attaining water quality standards, the Commission may consider the adoption of prohibitions or precautionary measures to further limit nutrient loading, including but not limited to, the following nutrient sources:

(a) Individual sewage disposal systems;

(b) Sod farms;

(c) Plant nursery facilities;

(d) Chemical de-icers;

(e) Commercial fertilizer retail facilities;

(f) Phosphate detergents;

(g) Golf courses; and

(h) Road and highway sand.

5. FLOODPLAIN PRESERVATION AREAS AND CONSERVATION EASEMENTS

The Commission recognizes protection of floodplain, riparian corridor, and other environmentally sensitive lands through public acquisition or conservation easement and restoration of the same lands for nutrient control through erosion control, revegetation or other means, as nonpoint source nutrient controls. The Authority and local governments may collaborate with other entities in pursuing easements, ownerships, and rights to protect the streams, riparian corridors, tributaries, and wetlands in the Cherry Creek watershed.

72.7 STORMWATER PERMIT REQUIREMENTS

1. Definitions

(a) "Owner," for the purposes of this section of the regulation only, means the owner or authorized representative of the facility or construction project.

(b) "Permittee," for the purposes of this section of the regulation only, means the Municipal Separate Storm Sewer System or MS4 that has been issued a stormwater discharge permit by the Division.

2. The following requirements, at a minimum, shall be incorporated into any Stormwater Permit issued to a Municipal Separate Storm Sewer System (MS4) in the Cherry Creek watershed, in addition to the requirements included in Regulation No. 61.8(11). Permittees may also incorporate requirements into their programs that are more restrictive than those outlined in this control regulation.

At a minimum, the MS4 permit will require that the regulated MS4 develop, implement, and enforce a stormwater management program designed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Colorado Water Quality Control Act (25-8-101 et seq., C.R.S.). Implementation of BMPs consistent with the applicable MS4 requirements included in Regulation No. 61 and the requirements of section 72.7.2 below constitute compliance with the standard of reducing pollutants to the MEP.

(a) Public education and outreach on stormwater impacts. The permittee must implement a public education program that includes the following:

(1) Distribution of educational materials or equivalent outreach focused on residential, industrial, agricultural, and/or commercial sources that are determined to have a significant potential to contribute phosphorus and nitrogen loads to State waters at a rate that could result in or threaten to result in exceedance of the chlorophyll a standard in Cherry Creek Reservoir. Examples of sources that may need to be addressed by the MS4's program include, chemical deicing, retailers with outdoor storage of

fertilizers, concentrated agricultural activities such as turf farms and landscape plant facilities, and animal feeding operations.

(b) Construction site stormwater runoff control.

(1) Regulated Activities. The permittee must develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to the MS4 from construction activities that disturb land, including, but not limited to, the following:

(i) Clearing, grading, or excavation of land;

(ii) Construction, including expansion or alteration, of a residential, commercial or industrial site or development; and

(iii) Construction of public improvements and facilities such as roads, transportation corridors, airports, and schools.

(2) Individual Homes. Individual Home Construction, including any Land Disturbance or Development for a single home, not including Land Disturbance for roads, road gutters or road improvements, that disturb less than one acre of land and where the Owner of the single home holds a permit for construction of only one dwelling within the subdivision, if any, containing the single home, must be required to meet the requirements of section 72.7.2(b)(5)(i)(D)(l), but does not have to be required to meet the other requirements in section 72.7(2)(b) of this regulation.

(3) Exclusions.

(i) Automatic Exclusions. The permittee may exclude the following activities from the requirements in section 72.7(2)(b) of this regulation.

(A) Agricultural Activities;

(B) Emergency and routine repair and maintenance operations for all underground utilities;

(C) Land Disturbances at residential or commercial subdivisions that already have adequate Construction BMPs and Permanent BMPs installed and operating for the entire subdivision, approved in compliance with this regulation, and where the original owner who obtained approval retains legal authority; and

(D) Routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility. (Maintenance

operations performed by the permittee may still be covered under the Municipal Operations minimum control measure).

(ii) Authorized Exclusions. The permittee may exclude the following activities from the requirements in section 72.7(2)(b) of this regulation, if authorized through a developed procedure for determination that water quality is adequately protected without imposing the requirements. This procedure may either be on a site-specific basis, upon submission by the owner of a written request for exemption to the permittee, or, if the determination can be simplified to allow for determination by the owner, through certification by the owner to the permittee that the waiver criteria have been met.

(A) Construction of a sidewalk or driveway; and

(B) Underground utility construction including the installation and maintenance of all utilities under hard surfaced roads, streets, or sidewalks, provided such land disturbance activity is confined to the area which is hard surfaced and provided that stormwater runoff and erosion from soil and materials stockpiles are confined and will not enter the drainage system.

(iii) Additional Exclusions. The permittee may allow for additional automatic and/or authorized exclusions, with approval of the Division, when it can be reasonably shown that excluding the activity will not pose an increased threat to water quality, or that the cost of administering the program for a specific activity with low risk of stormwater pollution outweighs the benefits to water quality. The Division reserves the right to not allow any additional exclusions.

(4) Submittal requirements.

(i) Construction BMP Plan. For Land Disturbance regulated by this program, a Construction BMP Plan must be submitted to and, following adequate review, approved by the permittee prior to the commencement of Land Disturbances.

(5) Required Construction BMPs.

(i) The following requirements for construction BMPs to be implemented prior to the commencement of Land Disturbances must be included in the permittee's program.

(A) Phase Construction. Owner shall schedule construction activities to minimize the total amount of soil exposed, including stockpiles, at any given time in order to reduce the period of accelerated soil erosion. Areas of Land Disturbance equal to 40 acres or greater must not be exposed for more than 30 consecutive days without temporary or permanent stabilization.

The Permittee may allow authorized exemptions to the 40-acre limit for removal and storage of cut material where geotechnical limitations restrict the use of temporary or permanent stabilization of the stored material (e.g. swelling soils, rock).

(B) Reduce Stormwater Runoff Flow to Non-Erosive Velocities when practicable using BMPs such as:

- Swales,
- Roadside swales,
- Slope diversion dikes,
- Terracing/Contouring,
- Slope drains, and/or
- Check dams.

(C) Protect State Waters Located on Construction Sites from Erosion and Sediment Damages resulting from Land Disturbance, using BMPs such as:

- Waterway crossing protection,
- Outlet protection,
- Temporary diversions, and/or
- Bank stabilization.

(D) Control Sediment before it Leaves Construction Site.

(I) All stormwater runoff from Disturbed Areas must be managed by at least one sediment entrapment BMP before the stormwater exits the site, such as:

- Silt fence,
- Filter strips.
- Sediment basins,
- Straw bale barriers, and/or
- Inlet protection.

(II) Vehicle Tracking. Owners must prevent deposition of sediment off-site by controlling vehicle tracking onto paved surfaces, using BMPs such as:

- Grates, and/or
- Vehicle tracking control pads.

(ii) The following construction BMPs must be required within 14 days after the commencement of Land Disturbances.

(A) Stabilize soils. All Disturbed Areas that remain exposed and where construction activities are not taking place for longer than fourteen (14) days shall be stabilized to protect the soils from erosion, using BMPs such as:

- Mulching,
- Erosion control mats, blankets, and nets,
- Seeding,
- Soil Binders,
- Cover crops, and/or
- Soil Roughening.

(B) Re-vegetate Disturbed Areas. Within 14 days after construction activity has temporarily or permanently ceased, owners must plant temporary and, where applicable, permanent vegetative cover on Disturbed Areas.

(I) Temporary Revegetation. Owners must provide temporary revegetation on all Disturbed Areas that will be exposed prior to completion of Land Disturbance activities. When seeding is not practicable (e.g., growing season constraints) the permittee may allow for temporary stabilization until planting is practicable.

(II) Permanent Revegetation. Owners must provide permanent revegetation and/or stabilized landscaping on all Disturbed Areas that will be exposed for more than two years or for an indeterminate amount of time.

(III) Variances. Schedules for requiring stabilization may be modified by the permittee to allow for special considerations such as stabilizing access areas and areas

in close proximity to continuing construction. Additionally, the permittee may allow for alternative approaches to stabilization if they can be shown to have erosion control capabilities similar to temporary or permanent revegetation.

(iii) Inspection/Operation and Maintenance.

(A) Inspection.

(I) Frequency. Owners must inspect Construction BMPs at the following times and intervals at a minimum:

- After installation of any Construction BMP;
- After any runoff event;
- At least every 14 days

For sites where construction activities are completed but final stabilization has not been achieved due to a vegetative cover that has been planted but has not become established, the permittee may allow for the owner to reduce inspection frequency to once per month.

(B) Operation and Maintenance. The owner must be responsible for operation and maintenance of BMPs, and must make any necessary repairs to BMPs immediately after a defect or other needed repair is discovered.

(c) Post-construction stormwater management in new development and redevelopment.

(1) Regulated Activities. The permittee must develop, implement, and enforce a program that ensures that controls are in place that would prevent or minimize water quality impacts to the MS4 from completed projects requiring coverage under part 72.7(2)(b)(1) of this regulation.

(2) Provisions for specific BMPs or equivalent protection included in Section 72.7, that for the purpose of reducing nutrient loading to Cherry Creek Reservoir go beyond the requirements in the Colorado Discharge Permit Regulations No. 61 for post construction BMPs, do not need to be required prior to discharge to a State water. As long as BMPs are in place at the site of new development and/or redevelopment in compliance with Regulation No. 61, regional facilities can be used to control phosphorus loads

to Cherry Creek Reservoir, that result in pollutant removal in compliance with parts 72.7(6), 72.7(7), and/or 72.7(8) of this regulation.

(3) Individual Homes. Individual Home Construction, including development for a single home, not including for roads, road gutters or road improvements, that disturb less than one acre of land during construction and where the Owner of the single home holds a permit for construction of only one dwelling within the subdivision, if any, containing the single home is not required to meet the requirements in section 72.7(2)(c) of this regulation.

(4) Exclusions.

(i) Automatic Exclusions. The permittee may exclude the following activities from the requirements in Section 72.7(2)(c) of this regulation:

(A) Agricultural Activities;

(B) Emergency and routine repair and maintenance operations for all underground utilities;

(C) Land Disturbances at residential or commercial subdivisions that already have adequate Post Construction BMPs installed and operating for the entire subdivision, approved in compliance with this regulation, and with adequate capacity to treat any additional discharges; and

(D) Routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility. (Maintenance operations performed by the permittee may still be covered under the Municipal Operations minimum control measure).

(ii) Authorized Exclusions. The permittee may exclude the following activities from the requirements in Section 72.7(2)(c) of this regulation on a site-specific basis, upon submission by the owner of a written request for exemption to the permittee and following adequate review and determination by the permittee that a permit is not needed to insure adequate protection of water quality:

(A) Residential subdivisions with a total disturbed area of less than one acre and are not part of a larger common plan of development;

(B) Construction of a sidewalk or driveway; and

(C) Underground utility construction, including the installation and maintenance of all utilities under hard surfaced roads, streets, or sidewalks, provided such land disturbance activity is confined to the area which is hard surfaced, and provided that stormwater runoff and erosion from soil and material stockpiles are confined and will not enter the drainage system.

(iii) Additional Exclusions. The permittee may allow for additional automatic and/or authorized exclusions, with approval of the Division, when it can be reasonably shown that excluding the activity will not pose an increased threat to water quality, or that the cost of administering the program for a specific activity with low risk of stormwater pollution outweighs the benefits to water quality. The Division reserves the right to not allow any additional exclusions.

(5) Submittal requirements.

(i) Permanent BMP Plan. For projects regulated by this program, a Permanent BMP Plan must be submitted to and, following adequate review, approved by the permittee prior to the commencement of Land Disturbances. The plan should include the descriptions, maps, etc. as specified by the permittee as needed to allow for an adequate review.

(ii) Inspection and Maintenance. The permanent BMP plan must also contain, at a minimum, the following information to address long term operation and maintenance of permanent BMPs:

(A) Maintenance and inspection protocols to ensure continued effectiveness of BMPs, and commitments from responsible agency/Owner to maintain Permanent BMPs.

(B) Dedication by easements or other legal means for access at the Permanent BMP sites for operation, maintenance, and inspection of Permanent BMPs.

(6) Permanent BMPs.

(i) Permanent BMP Requirement -- Minimum Water Quality Capture Volume ("WQCV"). For all areas of Land Disturbance, the permittee must require the installation and operation of Permanent BMPs that provide a WQCV designed to capture and treat, at a minimum, the 80th

percentile runoff event from all of the areas of Land Disturbance.

(ii) Approved BMPs. One or more of the following BMPs shall be required to meet the WQCV. All BMPs must be designed in accordance with good engineering practices; the permittee may provide additional design restrictions.

(A) Constructed wetland channel, in conjunction with extended detention basin, retention pond, constructed wetlands basin, porous pavement detention, porous landscape detention, or sand filter extended detention watershed.

(B) Grass swale preceded by porous pavement detention or porous landscape detention.

(C) Constructed wetland channel preceded by modular block porous pavement.

(D) Minimize Directly Connected Impervious Areas (MDCIA). This combination BMP of MDCIA in conjunction with extended detention watershed retention pond, constructed wetlands basin, porous pavement detention, porous landscape detention, or sand filter extended detention basin. At a minimum, for MDCIA, all impervious areas at the development must flow over grass buffer trips before reaching a stormwater conveyance system.

(E) Extended-Detention Basins (Dry Ponds).

(F) Retention Ponds (Wet Ponds).

(G) Constructed Wetlands Basin.

(H) Porous Pavement Detention.

(I) Porous Landscape Detention.

(J) Sand Filter Extended Detention Basin.

Alternative BMPs may be used if they are shown to have comparable pollutant removal characteristics for the given use, in comparison to the above listed BMPs, when properly designed and implemented. These BMPs must be determined to be acceptable by the permittee on a case-by-case basis, or, if appropriate, may be added to the menu of acceptable BMPs.

(iii) WQCV Alternatives. The permittee may allow alternative BMPs that do not use the WQCV approach or are in combination with the WQCV, if they are shown to have pollutant removal characteristics for the given use comparable to the above listed BMPs, when properly designed and implemented. These BMPs must be determined to be acceptable by the permittee on a case-by-case basis, or, if appropriate, may be added to the menu of acceptable BMPs. Specifically, the permittee may allow for the owner to use stream bank stabilization at the development site, and conservation of open space through clustering of development or setbacks from drainage ways, to reduce the need for the WQCV for the whole site.

(iv) Operation and Maintenance. The permittee must develop a program that requires owners to be responsible for operation and maintenance of BMPs and requires that they provide sufficient legal access, by dedicating easements for the sites of the permanent BMPs and access thereto for the Owner/agency responsible for operation and maintenance, the permittee, and for inspections, operation, and maintenance.

(7) Additional BMP Requirements. In addition to other requirements in this regulation for post-construction BMPs, the permittee must develop, implement, and enforce a program that ensures that permanent controls are in place at completed projects at the following: those facilities requiring coverage under both part 72.7(2)(d)(1) of this regulation and section 61.3(2)(e)(iii), 5 CCR 1002-61; and from other designated commercial and industrial facilities as discussed below. The program must address any stormwater pollutant sources at these facilities that may require unique management strategies. The permittee shall:

(i) Develop a program to designate commercial facilities on a case-by-case basis or by addition of a general commercial sector, based on a determination that they have a significant potential to contribute phosphorus and/or nitrogen loads to State waters at a rate higher than typical for other commercial or industrial land uses (e.g., stores with outdoor fertilizer storage, facilities with deicing operations).

(ii) The Permittee must require Owners to satisfy additional special permanent BMP requirements designed to prevent or reduce the amount of pollutants generated and/or released from the area of Land Disturbance, such as:

(a) Covering or enclosing activity in buildings or roofs;

(b) Providing secondary containment area to collect leaks and spills of fuels, lubricants, and other chemicals;

(c) Segregating or diverting stormwater runoff away from or around pollutant generating activity; and

(d) Routing site drainage to recycling or otherwise preventing direct discharge of vehicle or equipment wash-water.

(8) Stream Preservation Areas. The following requirements provide special standards and procedures for Land Disturbances in Stream Preservation Areas, which include Cherry Creek Reservoir, all of Cherry Creek State Park, drainage and discharges to the park within 100 feet of the park boundary; lands overlying the Cherry Creek alluvium; and all lands within the 100-year floodplain as defined by the Urban Drainage and Flood Control District.

(i) Additional BMP Requirements. For all Land Disturbances in Stream Preservation Areas, including Land Disturbances at Industrial Facilities, in addition to meeting all the Permanent BMP requirements in section 72.7.2(c)(5) and/or (6), permittees must require owners to implement one or more of the following BMPs to treat the WQCV for all runoff from areas of Land Disturbance within the Stream Preservation Area.

(A) Porous Landscape Detention designed for a 24-hour drain time;

(B) Constructed Wetland Watershed designed for a 24-hour drain time; or

(C) One or more of the following additional BMPs in Combination with Extended Detention Basin, Porous Pavement Detention, Porous Landscape Detention, or Constructed Wetland Basin:

(I) Grass Swales. All surface stormwater runoff from on-site impervious surfaces must be conveyed over grass swales before being discharged from the site; or

(II) Constructed Wetland Channels. All surface stormwater runoff from on-site impervious surfaces must be conveyed through wetlands before being discharged from the site.

(D) Alternative BMPs may be used if they are shown to have comparable phosphorus and nitrogen removal characteristics for the given use in comparison to the above listed BMPs when properly designed and

implemented. These BMPs must be determined acceptable by the permittee on a case-by-case basis, or, if appropriate, may be added to the menu of acceptable BMPs.

72.8 NUTRIENT MONITORING

1. Monitoring of wastewater facilities shall be consistent with the requirements of sections 72.4 and 72.5 of this control regulation. Wastewater facilities shall monitor nutrients including, but not limited to, nitrate, nitrite, ammonia, total phosphorus, total soluble phosphorus and orthophosphate.

2. The Authority shall develop and implement, in conjunction with local governments, a routine annual water quality monitoring program of the Cherry Creek watershed and reservoir. The monitoring program shall include monitoring of the reservoir water quality and inflow volumes, alluvial water quality, and nonpoint source nutrient loads.

   (a) Routine monitoring of surface water, ground water, and the reservoir shall be implemented to determine the total annual transport of nutrients to the reservoir.

   (b) Monitoring of nonpoint sources shall be implemented to determine nutrient loads and removal efficiencies of BMPs as required in the Trading Program, as well as to characterize the stormwater quality from various land uses in the Cherry Creek watershed.

3. The Authority shall consult with the Division in the development of the monitoring program to ensure that the monitoring plan includes the collection of data to evaluate nutrient sources and transport, to characterize nutrient load reduction, and to determine attainment of water quality standards in Cherry Creek Reservoir.

4. The Authority shall consult with the Division and other appropriate entities in developing water quality investigative special studies in furtherance of the phased TMAL approach contained within this control regulation. The Authority, in conjunction with the Division, shall develop a prioritized list of special studies that will improve understanding of the Cherry Creek watershed and reservoir nutrient dynamics.

   Special studies include, but are not limited to, the following areas of investigation:

   (a) Feasibility study of nutrient removal from point sources;

   Qualification of effectiveness of nonpoint source phosphorus removal strategies; and

   (b) Quantification of effectiveness of phosphorus control structures; and

   (c) Other studies as appropriate to support the phased TMAL.

5. The monitoring data shall be used by the Authority to determine nutrient fate and transport, calculate annual nutrient loads, document compliance with the applicable water quality standards, analyze long-term trends in water quality for both the reservoir and the Cherry Creek watershed, and calibrate water quality models for use in the next phase of the TMAL.

6. The Authority shall maintain all data collected pursuant to this section in an electronic database for evaluation and transfer to the Division and other entities.

72.9 REPORTING

1. The Authority shall submit an annual report on the activities required under this regulation to the Commission and Division by March 31 of each year. The report shall include the following categories and items:

   (a) Wastewater Facility Controls: monthly and annual loads; permit violations; approved site applications; and effectiveness in reducing nutrient loads.

   (b) Nonpoint Source Controls: Sediment and erosion control permit, inspection, and enforcement actions; Construction BMPs inspection and enforcement actions; Permanent BMPs construction, inspection, and maintenance actions; Flood control facilities retrofitting, inspection, and maintenance actions; Effectiveness in reducing nutrient loads; Funding and monitoring of nonpoint source control projects; and Public information and education actions.

   (c) Riparian and Wetlands Protection: Protection, enhancement, and restoration actions.

   (d) Wasteload Allocation: Temporary transfer and Reserve Pool actions.

   (e) Trading Program: Point source and nonpoint source actions.

2. The annual report shall provide data and information on water quality monitoring, point source and nonpoint source loadings, status of compliance with discharge permit limits and conditions, recommendations on any new or proposed expansion of treatment facilities, and recommendations for improving water quality. The format of annual reports and information within the reports shall provide comparability among previous years.

3. The annual report shall include evidence of decisions and/or agreements for the financing of nonpoint source control projects, the implementation of the stormwater permit requirements, and the adoption and implementation of best management practices by local governments. The annual report must demonstrate that reasonable further progress towards control of point and nonpoint sources of phosphorus is being made.

72.10 COMMISSION REVIEW

1. The Division and the Authority shall report to the Commission at each triennial review of this regulation on the progress made to control sources of phosphorus

loads, and the characterization of nutrient loads in the Cherry Creek watershed. The Commission shall review the performance of the Authority or local governments in implementing point source, nonpoint source, and regulated stormwater controls at each triennial review of this regulation.

2. Recommendations may be made to the Commission at each triennial review as to the need for additional controls or practices to reduce sources of phosphorus loading, for revised wastewater facility allocations based upon updated twenty year population projections, and additional characterization of nutrient loads in the Cherry Creek watershed. Nothing herein shall abrogate the discharge permit requirements for stormwater of section 61.3(2), 5 CCR 1002-61.

3. After the appropriate scientific studies and water quality modeling are implemented during the Phase 1 TMAL, the Commission may adjust the phosphorus total maximum annual load allocations stated in section 72.3 of this regulation, alter water quality monitoring program requirements, and require a nonpoint source management program, if the appropriate controls are not implemented.

4. During the Commission's regular reviews of this control regulation, allocations of phosphorus from Temporary Transfers, the Reserve Pool, or the Trading Program not already reflected in the listings in sections 72.3 and 72.4 shall be reviewed and, if appropriate, codified in such listings.

72.11-72.14 RESERVED

72.15 BASIS AND PURPOSE

The Colorado Water Quality Control Commission adopted a phosphorus standard of 0.035 mg/l for Cherry Creek Reservoir on August 14, 1984. The Statement of Basis and Purpose for the 0.035 mg/l phosphorus standard (5 C.C.R. 3.8.11) notes that the standard was based upon water quality data and hydrologic conditions of 1982.

Control of both point and nonpoint sources of total phosphorus is essential to protect the quality and uses of Cherry Creek Reservoir over the long term. This regulation is based on a state-local partnership in controlling total phosphorus. This relationship is described in the Upper Cherry Creek Basin Water Quality Management Plan. These regulations provide the basis for state actions in protecting Cherry Creek Reservoir's quality. Local regulations will be used to control nonpoint sources. Taken together, these state and local regulations provide a mechanism for protecting the quality of Cherry Creek Reservoir, given modeling based upon the hydrologic condition of 1982.

Total phosphorus loading varies with the water yield from the Cherry Creek basin watershed. For the purpose of determining progress in achieving phosphorus controls, 1982 will be used as the base year. Mathematical relationships contained in the Cherry Creek Clean Lakes Study will be used to index future yields of phosphorus to the 1982 base year. At higher water yields the totals phosphorus loading and inlake concentrations may be exceeded. The 14,270 pounds equate to the inlake total phosphorus standard of 0.035 mg/l as a growing season average, and an inlake chlorophyll a concentration of 15.0 ug/l.

Total annual phosphorus pounds of 14, 270 are based upon the number and type of wastewater treatment facilities and land uses described in the Upper Cherry Creek portion of the 208 Water Quality Plan. These total annual pounds of phosphorus were determined through the use of the Canfield-Bachman model as described in the plan.

The allocation of phosphorus pounds for point source discharges are predicated upon nonpoint source controls, as outlined in Section 4.2.6, being implemented throughout the basin and effectively removing 50% of the nonpoint source pollution. The purpose of Section 4.2.6(2) is to encourage a basin-wide approach to phosphorus controls. If the requirements of this provision are not met the Commission will consider the adoption of control regulations or permit requirements to insure compliance.

72.16 FISCAL IMPACT STATEMENT

The fiscal impact statement from the phosphorus standard on Cherry Creek Reservoir defined estimated benefits of the adopted standard. The master plan does not readdress the benefits of the standard but does define the costs of providing wastewater treatment and storm water treatment in the basin. To reduce phosphorus loads from nonpoint sources, the plan estimates a total cost of $2 to 4 million per year. The initial phase of sub-basin contracts for five sub-basins will have an annual cost of one million dollars per year. These costs will be borne by the residents of the basin since there is no known outside source of funding.

The point source costs are based on providing capacity up to the estimated phosphorus loading limit. This limit of 14.4 mgd is much less than the capacity needed to support buildout of the

basin but was used in the plan until other methods of phosphorus control (primarily nonpoint) can be identified.

To provide that amount of capacity in the basin is estimated to cost $30-35 million dollars on an annualized basis, including both capital and operation and maintenance costs. Estimating the portion of that cost that is strictly for phosphorus removal is very difficult since some phosphorus removal will occur in secondary treatment plants. Also the land application systems in the basin plan are used for water resources management regardless of the phosphorus removal benefit. However, the analysis suggested that plan components added strictly for phosphorus removal account for approximately 10 percent of the capital costs and the operating and maintenance costs of about 3 to 3.5 million dollars per year.

These costs fall within the range of benefits estimated by the Commission for the reservoir. It should be noted that the costs and benefits do not always fall upon the same individuals. The costs will be the responsibility of the basin residents and landowners while the benefits will primarily accrue to those persons, both in and out of the basin, who directly enjoy the beneficial uses of the reservoir.

72.17 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND PURPOSE (1989 REVISIONS)

The provisions of sections 25-8-202(1)(c), (h) and (2); and 25-8-205; C.R.S., provide the specific statutory authority for adoption of the attached regulatory amendments. The Commission also adopted, in compliance with sections 24-4-103(4) C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE:

In 1988, the Water Quality Control Division and the Cherry Creek Basin Water Quality Authority recommended that the Water Quality Control Commission consider revising this control regulation for the purpose of:

1. Clarifying section 4.2.5 so that the requirements for phosphorus controls in point source discharge permits are clear as to how and when these limits apply,

2. Extension of the compliance date for 50% removal of phosphorus contained in stormwater runoff from October 1, 1988 to January 1, 1992 in section 4.2.6,

3. Eliminating provisions in section 4.2.8 which are outdated or no longer apply.

The rationale for the change in section 4.2.5 is based on the conclusions of the Cherry Creek Basin Master Plan, which was approved by the Commission in 1985 but the recommended point source control strategy in that plan was not stated specifically in the control regulation.

The compliance date of October 1, 1988 for 50% removal of stormwater runoff source of phosphorus was not realistic in terms of the timeframe allowed for both construction of control structures and monitoring of their relative effectiveness. There is a lack of data to substantiate the effectiveness of recommended best management practices in the 1985 Master Plan. Until control structures can be built and monitored, and an extension of the compliance date in section 4.2.6 (2) appears reasonable.

Section 4.2.8 contained provisions which expressed the Commission's intent to review progress in controlling phosphorus within the Basin after the first two years of the control regulation being in effect. The two year review by the Commission has taken place. The intergovernmental agreement which formed the Cherry Creek Basin Authority in 1985 is no longer in effect because the Basin Authority is now authorized by legislation adopted by the General Assembly in 1988. Other statements in this section, paragraphs 3, 4, 5, and 6 were outdated or do not relate specifically to enforceable provisions of this control regulation and hence have been deleted.

New section 4.2.5(2) was added to address the concern raised by the Cherry Creek Basin Water Quality Authority that the Authority was not being provided adequate notice and opportunity to comment on compliance schedules for permits and enforcement actions involving dischargers in the Basin. The provision states that, where a discharger requests a compliance schedule in connection with permit issuance or renewal, the discharger must simultaneously notify the Authority of the request. The discharger also is required to submit evidence of the notification to the Division and to solicit comments on the compliance schedule from the Authority. With respect to compliance schedules referred to in this provision, the Division shall not take final action until at least 45 days after the date that notice of the request for a compliance schedule was provided to the Authority, unless comments from the Authority are received earlier. This provision does not include minor modifications to permits, which consist of such items as correcting typographical errors and changing interim dates in compliance schedules.

With regard to permit-based compliance schedules not requested by the discharger, these would be in the form of draft permits released to public notice by the Division. The normal public comment period for permits (except where a public meeting is held) is 30 days. Upon request by the Authority, however, the Division would extend that period to allow for comment by the Authority, as allowed by section 6.6.2(3) (5 CCR 1002-2).

An issue was raised at the hearing concerning notification of the Authority where the Division or discharger proposed a compliance schedule as part of a Division enforcement action, or resolution thereof. The Division expressed a concern regarding a set time limitation of 45 days as contained in section 4.2.5(2), on the basis that this might unduly hamper the Division's ability to address enforcement situations. The Division made it clear at the hearing, however, that it would have no objection to the Authority being informed of such compliance schedules and would provide to the Authority a copy of enforcement-related orders containing such compliance schedules.

As revised, section 4.2.8 provides that the Commission is to receive an annual report regarding the activities of the Authority. At the hearing, the Authority agreed to prepare the annual report, so long as it is understood that it will contain the same level of detail as in the past. This is the Commission's understanding and intent.

Two minor changes have been made to section 4.2.2. The definition of "Cherry Creek Basin" has been revised to refer to a map that will be incorporated into the regulation. Second, a definition of the term "Authority" has been added.

Finally, the title of the regulation has been shortened, for ease of reference.

72.18 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND PURPOSE (1991 REVISIONS)

The provisions of 25-8-202(1)(c) and 25-8-205, C.R.S., provide the specific statutory authority for adoption of the attached regulatory amendments. The commission also adopted, in compliance with 24-4-103(4), C.R.S., the following statement of basis and purpose.

The Cherry Creek Reservoir Control Regulation imposes wasteload allocations for total phosphorus and also specifies effluent limitations for phosphorus. The wasteload allocations provide poundage limitations for major domestic dischargers, as well as for other types of point and nonpoint source discharges. (See sections 4.2.3 and 4.2.4)

The effluent limitations contained in sections 4.2.5(1) and (3) have been revised to require that point source discharges of phosphorus, for a 30-day average, shall not exceed 0.2 mg per liter throughout the year. This change was based on the following factors. Some major domestic dischargers in the Cherry Creek Basin, particularly those utilizing rapid infiltration for treatment and disposal of effluents, have encountered difficulties in meeting the 0.1 mg/l (October-March) and 0.05 mg/l (April-September) limitations previously contained in the regulation. In order to meet those limitations, the dischargers would have been required to construct new wastewater treatment facilities at considerable expense to their residents. When the Cherry Creek Basin Water Quality Management Master Plan was approved, it was assumed that these rapid infiltration systems, operating in their current configuration, would be able to achieve the 0.1/0.05 mg/l effluent limitations. Also, wastewater treatment facilities utilizing other systems, including land application, have encountered difficulties from time to time in achieving the effluent limitations. The master plan provided the basis for adoption of the effluent limitations previously contained in the regulation. Although the dischargers have rehabilitated their systems to improve the quality of their discharges, they have not been able to meet the 0.1/0.05 mg/l effluent limitations.

It should be noted that the wasteload allocations contained in the regulation have not been revised. The wasteload allocations dictate the maximum quantity (pounds) of phosphorus which may be discharged each year by each domestic wastewater discharger. In order to meet their wasteload allocations while discharging at a concentration of 0.2 mg/l phosphorus, hydraulic capacities for some or all of these facilities may be reduced in their discharge permit. All hydraulic capacities in future site approvals shall be determined using the annual phosphorus allocation and an effluent phosphorus concentration of 0.2 mg.l.

Where the applicant for a discharge permit or a site approval can demonstrate, to the Division's satisfaction, that the treatment process is capable of producing an effluent phosphorus concentration of less than 0.2 mg/l, on an annual or seasonal basis, the hydraulic capacity will be established on the basis of the demonstrated phosphorus concentration(s) and the annual allocation. Such demonstration must include, at a minimum, design or operating data which establishes that the process can attain the requested effluent quality over the full range of expected operating conditions during the period in question.

Because the total poundage of phosphorus discharge will continue to be regulated at the same level, the water quality of the reservoir is expected to be protected at the same level under the revisions to the regulation. Moreover, the revisions will allow the Cherry Creek Basin Authority to utilize its collective resources in a manner more beneficial to the water quality of the reservoir. If the revisions had not been made, costly new wastewater treatment plant improvements would

have been necessary. The poundage allocation can be met in the short-term by allowing a less restrictive effluent limit and using more of the existing design capacity. Site approvals may require phosphorus concentrations of less than 0.2 mg/l if necessary to meet the wasteload allocation at the design capacity of the treatment facility. No new site approvals shall be granted which would allow construction of treatment facilities which would not meet their wasteload allocation. Under the revisions, however, the Authority will be able to focus on addressing nonpoint source control of phosphorus.

72.19 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE (1992 REVISIONS)

A temporary wasteload allocation of 365 pounds of phosphorus was established for the Denver Southeast Suburban Water and Sanitation District ("Denver Southeast") facility until 1990 or until completion of their new wastewater treatment facility, whichever occurred first. A footnote stated that the temporary phosphorus allocation to Denver Southeast would be reduced from 365 pounds to 213 pounds. Denver Southeast has completed construction of their new wastewater treatment facility. The Control Regulation has been amended to reflect the permanent wasteload allocation to Denver Southeast, as originally contemplated, of 213 pounds of phosphorus annually.

Allocations of phosphorus or modifications to phosphorus wasteload allocations required a rulemaking hearing by the Commission. The Authority believed that certain modifications to the wasteload allocations should be made more expeditiously. The Authority recommended, and the dischargers in the Basin and the Division supported, amending the Control Regulation to allow temporary transfers of phosphorus wasteload allocations between dischargers, provided both affected dischargers requested the transfer and it was approved by the Authority and the Division. This will not increase the total point source phosphorus allowed annually. However, it will allow consenting dischargers to transfer all or a portion of their phosphorus allocations, as may be appropriate. Such temporary transfers of phosphorus between dischargers may be particularly appropriate if a discharger treats another discharger's effluent for an interim period. It is not the intent for the Control Regulation to allow temporary transfers of phosphorus wasteload allocation to a discharger that has, throughout the applicable year, failed to comply with the phosphorus concentration for effluent set forth in the discharger's permit if the temporary transfer is solely to prevent the receiving discharger from exceeding its wasteload allocation.

A Reserve Pool for point source discharges of 303 pounds of phosphorus annually was established. The intent, as reflected in the Cherry Creek Basin Master Plan (1985), was that the Reserve Pool could be used for temporary allocations of phosphorus in events of emergencies, upsets or facility malfunctions. However, allocations from the Reserve Pool could only be obtained after notice, hearings and deliberations by the Commission through its rulemaking process. Also, because allocations from the Reserve Pool were to satisfy emergencies or interim needs, it was not necessary that the Control Regulation be amended to permanently reflect such interim allocations. In fact, reflecting such interim allocations in the Control Regulation meant that the Regulation would need to be amended repeatedly. These amendments authorize the Division to allocate phosphorus from the Reserve Pool temporarily, provided that the discharger requesting the Reserve Pool allocation has a recommendation of approval by the Authority. In determining whether to make phosphorus allocations from the Reserve Pool, the Division must consider the discharger's need for the allocation, whether the discharger has taken or is committed to taking reasonable interim steps to decrease, to the

extent practicable, the total phosphorus loading and the long-term plan for phosphorus control and the period of time necessary to implement those phosphorus controls.

All decisions of the Division pertaining to approvals or temporary transfers of phosphorus between dischargers or phosphorus allocations from the Reserve Pool, must be appealed to the Commission by any person adversely affected or aggrieved. The Commission shall utilize the criteria set forth in 4.2.4(4) in determining whether to approve temporary transfers of phosphorus, and the criteria set forth in 4.2.4(5) in determining whether to allocate phosphorus from the Reserve Pool.

72.20 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: (1995 REVISIONS)

The provisions of sections 25-8-202(1)(c), (h) and (2); and 25-8-205; C.R.S., provide the specific statutory authority for adoption of the attached regulatory amendments. The Commission also adopted, in compliance with sections 24-4-103(4) C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE:

The regulations were amended regarding land application of treated wastewater.

[Section 4.2.2(6),(7),(8) and (9)] First, consistent with Section 6.15.0, et seq., 5 CCR 1002-2, these regulations now distinguish between the two types of land application: land disposal and land treatment.

[Section 4.2.3(1)] The regulations reflect that wasteloads for all sources represent total permissible loads to the Reservoir, according to the 1984 modeling. The phosphorus standard was adapted for Cherry Creek Reservoir so the modeling has considered loads to the Reservoir not the Basin, as the limiting factor. Phosphorus which may be contributed to the Basin is either removed or controlled in the Basin and, therefore, would not affect the Reservoir wasteloads. The regulations was clarified to accurately reflect that the wasteloads are for the Reservoir.

[Section 4.2.4(1)] The modification to the table in section 4.2.4.1 is made to harmonize the control regulation with a consolidation of the wastewater service areas of the Arapahoe Water and Sanitation District and the Cottonwood Water and Sanitation District which has been incorporated in the approved Clean Water Plan for the basin.

[Section 4.2.4(1)] This regulation was modified to set forth the formulas that are used for calculating phosphorus concentrations and for calculating wasteloads from point source dischargers. The calculations clarify how the monthly volume of total effluent will be measured and how analytical results of effluent samples will be incorporated into the formulas.

[Section 4.2.4(4)(a)(1) and (d)] For dischargers utilizing land treatment, the land application is an important step in their final treatment process, reducing the concentration of pollutants in the effluent and providing uptake for nutrients. Therefore, for dischargers utilizing land treatment, the quantity and quality of the effluent is determined from the effluent percolate that reaches lysimeters placed in the land application area.

Generally, for land application sites the treated effluent is land applied at agronomic rates. When effluent is applied at agronomic rates no water reaches the lysimeters, so the return flow

and phosphorus concentrations are zero. Although the fields or land application areas are uniformly irrigated with effluent, on occasions some of the lysimeters will be dry and others have return flow. A percentage of those lysimeters recording flow, even though other lysimeters in the same field were dry and reported no phosphorus concentrations, have had effluent concentrations exceeding 0.2 mg/l. Thirty-day average phosphorus concentrations exceeding 0.2 mg/l have been reported in violation of phosphorus limits.

[Section 4.2.4(4)(a)(2)] For land disposal, the discharger does not account for any reductions in volume or nutrient uptake resulting from the land application. Therefore, dischargers using land disposal will measure the effluent quantity and quality at the wastewater treatment plant, after treatment, but before land application.

[Section 4.2.5(1)] The regulation has been amended to allow a 30-day flow-weighted average phosphorus concentration for dischargers using land treatment of 1.0 mg/l total phosphorus. The regulations maintain the phosphorus concentration limit for direct dischargers and dischargers using land disposal at .2 mg/l as a 30-day average, and .5 mg/l as a daily maximum concentration. The 1.0 mg/l total phosphorus limit is consistent with the phosphorus concentrations allowed in the Bear Creek and Chatfield Basin Control Regulations, two other phosphorus limited reservoirs in the state. It is understood that in order to reach permitted hydraulic capacities it may be necessary for dischargers to maintain average phosphorus concentration levels less than 1.0 mg/l.

[Section 4.2.5(3)] Estimated return flows from new land treatment sites must be calculated for the purpose of issuing site approvals and discharge permits. For the purpose of determining the phosphorus concentrations and wasteloads from new land treatment sites, when the discharger has an augmentation plan approved by Water Division One, District Court, State of Colorado, the augmentation plan will be used to calculate anticipated return flows. When a discharger for new land treatment sites does not have an approved augmentation plan that sets forth the means for calculating the return flows, the applicant will generally use the Soil Conservation Service Technical Manual Release No. 21, "Irrigation Water Requirements" (Rev. Sept. 1970) and the Cottonwood curve for return flows to determine the estimated return flows. Upon actual land treatment of wastewater effluent, the return flows or effluent volume shall be the amount measured in the lysimeters and calculated by the formula.

[Section 4.2.6(1)] The wasteload analysis and allocation for nonpoint sources includes stormwater, even that stormwater which is now subject to an NPDES permit. The nonpoint source load has been and remains 10,290 pounds of phosphorus annually. This load was determined assuming approximately 20,580 pounds of nonpoint phosphorus contributed to the Basin and that 50% of that phosphorus load would be removed or controlled through best management practices and water quality facilities. The regulation acknowledges that the load to the Reservoir is 10,290 pounds, however, it is still anticipated that loads to Cherry Creek Basin will be greater than 10,290 pounds but will be reduced or controlled by such means as are appropriate to reduce and maintain the total nonpoint source load to the Reservoir at 10,290 pounds per year or less.

[Section 4.2.6(3)] The control regulation previously allowed a nonpoint source credit program, which is now further detailed. Phosphorus credits from nonpoint source projects may be granted to allocations to the reserve pool or the point source dischargers sponsoring the project provided that the projects demonstrate removal of nonpoint source phosphorus. The project sponsors will need to conduct appropriate water quality monitoring to demonstrate the quantity of phosphorus removed. Upon application by a project sponsor for nonpoint source phosphorus

credits, the Authority will review the proposal and make recommendations to the Division regarding the grant of phosphorus credits. Phosphorus credits approved by the Division will be incorporated and reflected in the 208 Plan. At the next rulemaking hearing or triennial review of the regulation amendments to the regulation will be proposed to incorporate the credits.

PARTIES TO THE RULEMAKING HEARING

1. Cherry Creek Water Quality Authority
2. Arapahoe County Water and Wastewater Authority
3. The Cottonwood Water and Sanitation District

72.21 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JULY, 1997 RULEMAKING

The provisions of sections 25-8-202 and 25-8-401, C.R.S., provide the specific statutory authority for adoption of the attached regulatory amendments. The Commission also adopted, in compliance with section 24-4-103(4) C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

The Commission has adopted a revised numbering system for this regulation, as a part of an overall renumbering of all Water Quality Control Commission rules and regulations. The goals of the renumbering are: (1) to achieve a more logical organization and numbering of the regulations, with a system that provides flexibility for future modifications, and (2) to make the Commission's internal numbering system and that of the Colorado Code of Regulations (CCR) consistent. The CCR references for the regulations will also be revised as a result of this hearing.

72.22 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE (1997 REVISIONS)

The provisions of 25-8-202(1)(c), and (2) and 25-8-205, C.R.S. provide the specific statutory authority for adoption of these regulatory amendments. The Commission also adopted, in compliance with 24-4-103(4) C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

The 1997 revisions to the Cherry Creek Reservoir Control Regulation authorize and establish the general parameters for a phosphorus Trading Program for the Cherry Creek Basin. The Trading Program, to be administered primarily by the Authority in accordance with guidelines drafted by the Authority, allows credits for nonpoint source phosphorus reduction projects, that remove phosphorous beyond required BMPs, to be allocated to point source dischargers. (See Section 72.4(8)(a).) The goal of the Trading Program is to allow those trades which will have a net water quality benefit in the Basin and maintain the inlake chlorophyll a level of 15 ug/l.

Because of the Authority's basinwide activities and the condition of the Cherry Creek watershed, the Cherry Creek Basin is suitable for a Trading Program, and the Authority has the experience to implement the Trading Program. The Authority has, and continues, to monitor nutrients and other parameters, from point and nonpoint sources in the surface water and alluvial groundwaters in the watershed and to evaluate the condition of the Reservoir. In part, these data have shown that phosphorus loading to the Basin is less than projected in the 1985 Cherry

Creek Basin Water Quality Management Master Plan ("Master Plan"). The Authority is developing a trend line to track the relationship, over time, of phosphorus loads and inlake chlorophyll a levels. The Authority is reevaluating and refining, as appropriate, the models and or bases for calculating the assimilative capacity of the Basin, determining the phosphorous/chlorophyll a relationship in the Reservoir, and predicting point and nonpoint phosphorus loads in the watershed, all of which will be considered for the 1998 update to the Master Plan. In addition, the Authority has constructed four major nonpoint source projects, located close to the Reservoir, that have demonstrated effective phosphorus removal. The Authority is committed to ensure the operation and maintenance of these projects into the future.

Under the Trading Program, the Authority is authorized to approve two types of trades. (See Section 72.4(8)(b).) The Authority may: (1) approve the award of Trading Pool phosphorus pounds from Authority projects to point source dischargers, and (2) approve credits from individual (non-Authority) nonpoint source projects that remove phosphorus. The "Trading Pool" consists of phosphorus pounds from Authority nonpoint source projects determined by the Authority to be available for award to dischargers in the Trading Program. A trade ratio will be established for each Authority or individual nonpoint source project, on a project-specific basis, in the range of 1.3:1 to 3:1, meaning that for every 1.3 to 3 pounds of phosphorus removed by a nonpoint source project, a discharger may be awarded one (1) phosphorus wasteload allocation pound. (See Section 72.4(8)(f).) The Authority will consult with the Division and consider their comments and analysis when evaluating projects and quantifying credits for inclusion in the Trading Pool, when establishing trade ratios, and when reviewing applications for individual nonpoint source trades. Applicants for all trades under the Trading Program are encouraged to review the Authority's guidelines for trading and meet with the Authority before submitting applications for trades.

Net water quality benefit will be specifically considered for each trading project, trade ratio, and award of trade credits. Only nonpoint source projects that remove phosphorous beyond required BMPs will qualify for trading. Required BMPs are those temporary BMPs such as construction erosion controls or longterm BMPs for new development mandated by the local jurisdiction or the Authority. Trade credits will not be awarded for those projects, or those portions of projects, implemented to meet the required BMPs. Moreover, all approved trades, trade projects, trade ratios, and phosphorus pounds awarded in trades remain subject to continued Authority oversight and may be rescinded or modified, as appropriate, in accordance with monitoring data or other evidence. In addition to the stringent requirements for trades and projects, dischargers who wish to receive trade credits must demonstrate compliance with several criteria, including compliance with effluent limitations and optimal treatment efficiency of the discharger's facility. Lastly, all point source dischargers awarded trade credits remain subject to the limitations in their discharge permits, and no discharge based upon the award of phosphorus from the Trading Program shall be permitted until the subject discharge permit is amended, as appropriate, by the Division. When considering permit applications for increased phosphorus based upon allocations from trading, the Division may, if appropriate for the phasing of the facility, include less than the facility's total wasteload allocation in the facility's discharge permit. In issuing the permit, the Division must comply with this Control Regulation and any other applicable statutory or regulatory requirements, including the Colorado Discharge Permit System Regulations.

The Authority has agreed with the Division to implement the Trading Program in two phases. In the first phase, commencing upon approval of these 1997 revisions, the Authority will proceed with the Trading Pool and award of credits therefrom pursuant to Section 72.4(8)(b)(1) (and as

further described under Sections 72.4(8)(c) and (d)). The Trading Pool in this initial phase also will limited to phosphorus pounds from the Authority's four largest, established nonpoint source projects: Shop Creek Water Quality Improvements, Quincy Outfall Water Quality Improvements, Cottonwood Creek Water Quality Improvements, and East Shade Shelter Shoreline Stabilization Project. As an additional safety margin, the Authority has proposed, during Phase I trading, to set aside -- and not use -- 500 pounds per year from the total nonpoint source phosphorus wasteload allocation (10,290 pounds per year), thus reducing the total nonpoint source allocation to 9,790 pounds per year during Phase I trading.

Once allocated to the Trading Pool during Phase I, the phosphorus pounds from the four projects may be awarded to any eligible discharger. Phase I trades will only be implemented to allocate phosphorous to either, new dischargers that do not have an existing allocation, or to existing dischargers that are providing advanced phosphorous treatment to achieve the greatest possible reduction of phosphorous yet, due to growth pressures, are in imminent danger of exceeding their allocation.

The entire Trading Program may be implemented after the Authority has completed evaluations of the Reservoir and assimilative capacity of the watershed and, in consideration of these findings, the Authority has prepared and the Commission approved the 1998 update to the Master Plan and revisions to this Control Regulation. After these evaluations and Commission approval of the Master Plan update, the Authority will have a greater scientific basis for the final phase of the Trading Program. In addition to first phase trades, the Authority may then approve trades for individual nonpoint source projects under Section 72.4(8)(b)(2) and (e), and the Trading Pool may be augmented with phosphorus pounds from additional Authority projects.

In addition to the Trading Program, the 1997 revisions establish a new Emergency Pool for temporary phosphorus allocations (Section 72.4(6)), and modify the Reserve Pool to consist of pounds available for permanent phosphorus allocations to dischargers. (Section 72.4(7).) Formerly, the "Reserve Pool" was used for temporary allocations; the more aptly-named Emergency Pool now serves this function.

SPECIFIC AMENDMENTS

Definitions for the following terms were added to Section 72.2: "Emergency Pool," "Reserve Pool," "trade ratio," "Trading Pool," and "Trading Program."

Section 72.3 has been amended to reflect that the total phosphorus allocation for point sources may be exceeded if the point source dischargers' allocations have been increased with phosphorus pounds from the Trading Program.

Section 72.4(1), which lists specific phosphorus wasteload allocations by individual source, likewise has been amended to reflect that a discharger may exceed its designated allocation to the extent of phosphorus pounds awarded from the Trading Program, Reserve Pool, Emergency Pool, or through temporary transfers. Section 72.4(1) also sets forth an allocation of 100 pounds to the Emergency Pool and changes the allocation for the Reserve Pool to 203 pounds.

Section 72.4(5), "Temporary Transfer of Phosphorus," has been amended to streamline and expedite phosphorus awards. These changes are addressed below along with the discussion of similar amendments to Sections 72.4(6) and 72.4(7).

Section 72.4(6) has been renamed "Emergency Pool." The Emergency Pool will be used for temporary phosphorous allocations in emergencies. The Reserve Pool will be used to provide longterm wasteload allocations, based upon, in addition to the other factors enumerated at Section 72.4(7)(a), the need of the applicant and a comparison of the need of the applicant, other dischargers, and availability of phosphorous pounds.

Section 72.4(7), now provides for a "Reserve Pool" and sets forth the procedures for awards of phosphorus pounds from the Reserve Pool.

Sections 72.4(5) (temporary transfers), 72.4(6) (Emergency Pool), and 72.4(7) (Reserve Pool) all streamline and expedite the award of phosphorus by authorizing the Authority to accept applications and make decisions on these three types of phosphorus awards. In the previous version of this Control Regulation, the Division, not the Authority, made decisions on temporary transfers and temporary allocations. The change was appropriate because the Authority, as the agency specifically responsible for water quality in the Basin, is well suited to make informed and timely decisions on applications. As reflected in all three revised Sections, the allocations of phosphorus shall become effective upon the Authority's final decision, subject to appeal. However, no discharge based upon these allocations is permitted until the Division's issuance or amendment of the applicant's discharge permit incorporating the allocation.

New Section 72.4(8) establishes the Trading Program. In addition to the procedures and criteria set forth in this Control Regulation, the Authority will implement the Trading Program in accordance with guidelines developed by the Authority.

Section 72.4(8)(a) describes the general scope of the Trading Program and the Authority's primary role in implementation of the program. Section 72.4(8)(b) identifies the two types of trading -- awards of Trading Pool phosphorus pounds and individual nonpoint source projects trades -- authorized under the program.

Section 72.4(8)(c) sets forth the criteria for approving Authority nonpoint source projects for inclusion in the Trading Pool. The Authority will consider comments from the Division on proposals to include projects in the Trading Pool, evaluations of project removal efficiencies, and determinations of appropriate trade ratios. During the first phase of the Trading Program, the Authority will propose and consider comments from the Division on four Authority projects -- Shop Creek, Quincy Drainage, Cottonwood Creek, and East Shade Shelter.

Section 72.4(8)(d) describes the criteria for awards of phosphorus pounds from the Trading Pool to point source dischargers discharging in the Basin. The Authority may approve awards based upon, in addition to other factors, need, the facility's treatment efficiency, compliance with effluent limitations, completeness of application for phosphorus pounds, consistency with the trading guidelines, Master Plan and this Control Regulation, the facility's plans for expansion, and net effect on water quality. When determining need for credits from the Trading Pool, the Authority will consider whether the facility's treatment flows are at or near capacity, whether the facility's wasteload allocation is insufficient to accommodate wastewater flows from the facility's expansion, and whether the facility's plans for expansion and quantity of desired credits are reasonable. When determining the treatment efficiency of applicants for credits from the Trading Pool, the Authority will consider whether the facility is operated efficiently and achieves optimal results expected for the facility's wastewater treatment technology.

Section 72.4(8)(e) identifies the criteria for Authority approval of individual nonpoint source project trades. In addition to other factors, the Authority will consider generally the same criteria

enumerated at Section 72.4(8)(d) for awards of Trading Pool pounds, the technical specifications of the project, and quantification of the project's phosphorus removal. The Authority will consider, in its decision-making, comments from the Division on applications for trades for individual nonpoint source projects, evaluations of project effectiveness, and determinations of appropriate trade ratios and number of phosphorus pounds to be awarded.

Section 72.4(8)(f) describes the factors to be considered when determining the trade ratio for each project in the range of 1.3:1 to 3:1. These factors include operation and maintenance of the project, effect of net water quality, and a margin of safety. Trade ratios for all projects remain subject to Authority oversight and may be adjusted from time to time based upon monitoring data or other evidence. In order to reflect the effects on varying hydrologic years on project effectiveness, phosphorus removals for projects will be determined on the basis of representative data and will be reevaluated periodically.

Section 72.4(8)(g) sets forth operation and maintenance requirements for all trade projects. The Authority shall ensure operation and maintenance of Authority projects, and project owners of individual nonpoint source projects must own, operate, and maintain the projects in order for their phosphorus trade credits to remain viable.

Section 72.4(8)(h) provides that all allocations awarded pursuant to the Trading Program and all Authority decisions on trades will be effective upon the Authority's final decision. However, dischargers are required to obtain from the Division any necessary new or revised discharge permits before discharging phosphorus credits awarded.

Section 72.4(8)(I) reflects that all trades, trade ratios, pounds in the Trading Pool, and pounds awarded in trades remain subject to Authority oversight indefinitely and may be modified, as appropriate.

New Section 72.4(9), entitled "Adjudicatory Hearings," describes the procedures for appeals under this revised Control Regulation. Under Section 72.4(9)(a), persons adversely affected or aggrieved by Authority final decisions on temporary transfers and awards of phosphorus from the Emergency or Reserve Pool may request a hearing before the Commission. Section 72.4(9)(b) provides that persons adversely affected or aggrieved by Authority final decisions on assignment of pounds to the Trading Pool, on awards of phosphorus from the Trading Pool, or on trades involving individual nonpoint source projects, may request a hearing before the Commission. Section 72.4(9)(c) indicates that all appeals must be filed no later than thirty (30) days after the Authority's final decision and that all adjudicatory hearings will be conducted pursuant to C.R.S. 1973, 24-4-105.

Section 72.5(3), regarding wastewater treatment plant sizing for site approval and permits, has been amended to include consideration of allocations from temporary transfers, Emergency Pool, Reserve Pool, or the Trading Program.

Section 72.6(3) has been deleted, because the concept of point source discharges receiving credits for nonpoint source removals is now addressed in Section 72.4(8), "Trading Program." Section 72.6(4) becomes Section 72.6(3).

Section 72.8(1) has been amended to require that the Authority's annual report to the Commission includes information on the Trading Program. New Section 72.8(3) provides that during the Commission's regular reviews of the Control Regulation, phosphorus allocations from

the Reserve Pool, Emergency Pool or Trading Program not already reflected in the listings in Sections 72.3(1) and 72.4(1) shall be reviewed and, if appropriate, codified in such listings.

PARTIES TO THE RULEMAKING HEARING

1. Cherry Creek Basin Water Quality Authority
2. City of Westminster
3. Chatfield Watershed Authority
4. Happy Canyon Partnership

72.23 FINDINGS REGARDING BASIS FOR EMERGENCY RULE ADOPTED JANUARY 12, 1998

The Commission held this emergency rulemaking hearing to readopt the revisions adopted by the Commission on November 3, 1997. The readopted provisions are effective immediately and will remain in effect on an emergency basis until June 30, 1998, to provide time for a non-emergency rulemaking hearing. The Commission recently determined that due to an administrative error, an incorrect version of the amended rules was filed with the Secretary of State following the November 3, 1997 rulemaking.

The Commission finds that the immediate adoption of this regulation is imperatively necessary for the preservation of public health, safety, or welfare and that compliance with normal notice requirements would be contrary to the public interest. Emergency adoption is necessary to assure that the published regulation is consistent with the regulation that the Commission adopted, to avoid confusion for the public and be consistent with the Water Quality Control Commission's action.

72.24 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE (APRIL, 1998)

The provisions of 25-8-202(1)(c), and (2) and 25-8-205, C.R.S. provide the specific statutory authority for adoption of these regulatory amendments. The Commission also adopted, in compliance with 24-4-103(4) C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

The Commission held this rulemaking hearing to make permanent readoption of the regulation changes adopted in a November, 1997 Rulemaking Hearing and readopted in an Emergency Rulemaking Hearing that was held on January 12, 1998.

72.25 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE (May 2001)

The provisions of 25-8-202(1)(c), and (2) and 25-8-205, C.R.S. provide the specific statutory authority for adoption of these regulatory amendments. The Commission also adopted, in compliance with 24-4-103(4) C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

In September of 2000 the Commission adopted a new standard for the protection of Cherry Creek Reservoir. The new standard, a maximum growing season average of 15 ug/L of

chlorophyll a, was determined to be protective of the uses of the reservoir. The Commission requested that the Division, in association with the Cherry Creek Basin Water Quality Authority (Authority) and other interested parties, draft an amended control regulation in accordance with the new standard.

The Commission expressed concerns about the deterioration of water quality in Cherry Creek Reservoir. The Commission recognized the likelihood that additional point source and nonpoint source control efforts beyond those set forth in the proposed control regulation revisions will be necessary in the future. The Authority was directed to proceed expeditiously in implementing the technology and information based controls required in the control regulation to meet the new water quality standards and protect the designated uses.

The Commission determined that it was appropriate to adopt the control regulation as a "phased TMDL" (Total Maximum Daily Load), or in the case of a reservoir, a "Total Maximum Annual Load" (TMAL). The "phased TMAL" process provides for the adoption of both point source and nonpoint source requirements that will provide protection for the reservoir, while additional studies of contributing problems to reservoir quality are investigated, and any additional necessary control programs are formulated. The Commission intends that this first phase of the TMAL will be in place within 3 to 6 years. An in-depth analysis of reservoir quality problems, the success or failure of existing control strategies, and new control requirements will be reviewed at future triennial hearings of the regulation.

Many changes to the numbering of the subsections of the regulation have occurred. This basis and purpose statement provides information about the major substantive changes to the regulation, rather than focusing on the details of numbering. The following provides an analysis of the basis and purpose for changes to each of the major sections of the control regulation.

72.2 Definitions

The following changes or additions were made to terms relating to nonpoint and regulated stormwater sources. Several existing definitions were modified and several new definitions were included to correspond with terms used in the newly-added sections of the regulation dealing with nonpoint sources (Section 72.6) and regulated stormwater sources (Section 72.7). They are intended to clarify the distinction in the amended regulation between these categories of sources. Although nonpoint and regulated stormwater sources share an annual load allocation, they are subject to different control requirements under the regulation.

Accordingly, the definition of "nonpoint source," was made more restrictive, for purposes of this regulation, to include only activities or facilities that are not subject to the requirements of the stormwater regulations in Regulation 61 (5 CCR 1002-61). A definition for "regulated stormwater" was included to explain the distinction in this regulation between stormwater discharges from entities that are regulated under Regulation 61, and stormwater from other sources. Along these lines, the definition for "point source" was amended to expressly include conveyances of regulated stormwater. The definition for "stormwater" was added to clarify that the term, when not accompanied by the word "regulated," encompasses all sources of stormwater (regulated sources, as well as other sources).

A definition for "Municipal Separate Storm Sewer System" taken from Regulation 61 was included to clarify the term as used in Section 72.7. The newly-added definitions for "disturbed areas," "individual home construction," and "land disturbance" were taken directly from the "Cherry Creek Reservoir Watershed Stormwater Quality Model Ordinance" (February 16, 2000),

and they relate specifically to requirements for MS4s in Section 72.7 of this regulation. The term “best management practices” was expanded to clarify its applicability to nonpoint and regulated stormwater sources of pollution. A definition for "Water Quality Capture Volume" was added to explain the term as used in Section 72.7(2)(e)(6) concerning permanent BMP requirements for all land disturbances. The WQCV concept is more comprehensively discussed in the Urban Drainage and Flood Control District’s Urban Storm Drainage Manual, Volume 3, which the Commission acknowledges as a nationally recognized reference on the subject. The Commission encourages use of this reference to those choosing to use the WQCV approach for determining the minimum requirements for areas of land disturbance.

The following changes or additions were made to terms of general applicability. A definition of "TMAL" was included to explain the term’s use in Section 72.3 concerning the sum of total phosphorus allocations for the various sources. A definition for “Industrial Process Wastewater Sources" was added to clarify the scope of the term as used in Section 72.3 as a category for phosphorus load allocations. “Process Wastewater” was added to define the term as used in the definition of “Direct discharge”. “Direct discharge” was modified to encompass a broader category of subsurface discharges, and to clarify that the term does not include discharges from regulated stormwater sources. The definition for “Wastewater Facilities” is identical to the definition for “domestic wastewater treatment works” in the Colorado Water Quality Control Act. The term was added to Section 72.3 as a phosphorus source category with corresponding load allocations that are further detailed in Section 72.4. “ Semi-urban Areas” was included to define the term as added to the list of wastewater facilities in Section 72.4 with corresponding wasteload allocations. A definition for "Land Application Return Flow Factor" was included to explain the term as used in the formula in Section 72.4(8)(a) for calculating the monthly volume of phosphorus discharged by point source dischargers utilizing land treatment. “Phosphorus bank” was added to define the term as referred to in the Trading Program under Section 72.5(3)(i). "Cherry Creek Watershed" was expanded to more properly describe the nature of the area subject to this regulation and to elaborate on the meaning of tributaries, i.e., that they include wetlands and alluvial groundwater. “Background Sources” was modified to clarify that “groundwater” as used in the definition is limited to groundwater <u>in its natural condition.</u> Definitions for “Local Government” and "Division" were added for clarification. “Designated regional management agency” was changed to “Designated water quality management agency” to reflect the water quality-related functions of such entities.

<u>72.3 Phase 1 Total Maximum Annual Phosphorus Load Allocations and Activities</u>

Review of the Total Maximum Annual Load (TMAL) has revealed that the current allocations are not attaining water quality standards or protecting current designated uses. The Commission recognizes that this situation requires that the necessary controls be identified that will attain the applicable standards and protect the uses. The identification of the necessary controls will require considerable more investigation and evaluation before the Control Regulation can be revised to reflect these changes. During this period, the process for attaining water quality standards must continue by pursuing known technologies and processes throughout the Cherry Creek watershed.

The total maximum annual load (TMAL) of phosphorus for the reservoir was maintained at 14,270 pounds. The allocations of pounds to Nonpoint point sources, Background sources, Wastewater facility sources, Industrial process wastewater sources, and Individual sewage disposal systems also remain unchanged. The Commission recognizes that until additional investigations are completed, a new TMAL cannot be calculated. The Commission also recognizes that the reservoir is not attaining the chlorophyll <u>a</u> standard, and that a “phased

TMAL" was the appropriate way to proceed at this time. The Environmental Protection Agency agreed with this approach. The Commission intends that the phased approach be implemented consistently with EPA Guidance (Guidance for Water-Quality Based Decisions: The TMAL Process, U.S. EPA, 1991. EPA 440-4-91-001). Section 72.3(2) was modified by the addition of a Margin of Safety factor to the TMAL formula. Section 72.3(3) was also modified to reflect changes in the trading program. In the past trades were allowed which could lead to an exceedance of the point source allocation. This section makes it clear that any phosphorus awarded to wastewater facilities from the trading program will not exceed the TMAL allocation of 2,360 pounds. This change is reasonable since there is adequate phosphorus available in the wastewater facility allocation.

A new Section 72.3(4) was added to identify the future activities to be implemented by the Authority. These activities include additional point source controls, construction of nonpoint source projects, and investigative studies to better define the hydrology, phosphorus sources, chemical processes, and relative loads to the watershed and reservoir. The intent of the schedule is to identify appropriate activities implemented during the first phase of the TMAL that will result in reasonable progress in attaining water quality standards and to support future revisions to the control regulation if necessary.

72.4 Point Source Wasteload Allocation and Effluent Limitations

In determining appropriate wasteload allocations (WLA) and effluent limitations for total phosphorus, the Commission sought to strike a balance between near term (2010) facility capacity needs, population and employment projections in the Metro Vision Plan, reasonably available treatment technology, and the fact that the recently adopted chlorophyll a standard is not being met in the reservoir.

The population projections in the Denver Regional Council of Government's (DRCOG) Metro Vision Plan used to project necessary wasteload allocations for the period during the Phase 1 TMAL proved to be problematic. The figures from the Metro Vision Plan were not consistent with many of the wastewater facility's recently approved site applications and/or utility plans. The Commission expects the Division and DRCOG to work together to establish accurate population and employment projections in the next Metro Vision Plan. This will ensure that accurate population and employment projections are used in planning efforts that support new or expanded wastewater facilities. The Commission has established wasteload allocations in the control regulation based on maximum allowable effluent concentration of 0.05 mg/l and the hydraulic capacities listed below, which are based on the near term (2007-2010) population and employment levels in the Metro Vision Plan. Where a site application for a hydraulic capacity in excess of the those listed below is approved, the applicant shall either accept an effluent phosphorus concentration limitation based on their current wasteload allocation, or obtain an additional wasteload allocations in accordance with the provisions of 72.4(6) or 72.5(2)(a), or 72.5(3) of the control regulation.

Wastewater Facility	Hydraulic Capacity
Arapahoe Co. W&WW Auth.	2.40 MGD
Parker Water & San. Dist.	3.50 MGD
Inverness Water & San. Dist.	0.90 MGD
Denver SE Suburban Water & San. Dist.	2.00 MGD
Meridian Metropolitan District	0.74 MGD
Stonegate Center Metropolitan District	1.06 MGD

The Commission set the wasteload allocations for wastewater treatment facilities at levels that were based on the design capacity that is expected to serve the respective service area until the 2007 to 2010 planning horizon. This is intended to provide dischargers with some certainty for additional growth during the period that the final TMAL is being developed. These figures were generally supported by recently approved site applications or utility plans. However, in some instances where recent planning was lacking or projected population and employment numbers significantly exceeded DRCOG projections, as in the case of Arapahoe County Water and Wastewater Authority and Cottonwood Water and Sanitation District, the flow used to calculate the respective wasteload allocation was reduced to a level that will accommodate the year 2007 to 2010 growth based on information obtained from the affected entities. Arapahoe/Cottonwood presented an alternate proposal for a combined allocation of not less than 83% (471 lbs.) of the original allocation (567 lbs.). Based on additional discussions between the Division and Arapahoe/Cottonwood, the Commission reallocated 37 pounds from the Reserve Pool to increase the Arapahoe/Cottonwood total combined wasteload allocation from 365 to 402 pounds.

An allocation was also set aside for future growth within the Semi-urban Areas based on predictions by DRCOG. This allocation can be accessed by new wastewater facilities or existing facilities that are serving development that would otherwise be served by a new wastewater facility outside of their urban growth boundary. Any increase in a wasteload allocation for existing facilities, other than through acceptance of out-of-service-area wastewater flows, can occur only as a result of a trade of nonpoint phosphorus for point source phosphorus in accordance with the revised trading requirements.

The table in Section 72.4(2) was modified to include the Semi-urban Areas wasteload allocation of 236 pounds of phosphorus. The wasteload allocation for Industrial Process Wastewater Facilities is now recognized in the table with its 50 pounds of phosphorus. This new category recognizes activities such as mining, industrial processes, and confined animal feeding operations. Specific wasteload allocations for facilities falling into this category may become necessary by the next triennial review. This additional category increases the wasteload allocation for all wastewater facilities to 1,928 pounds of phosphorus.

The Reserve Pool and Phosphorus Bank (formerly Trading Pool) phosphorus pounds were modified based on alternate proposals by the Division and the Authority to change Section 72.5. The Division proposed that the Reserve Pool be a consolidation of the pounds of phosphorus previously allocated to the Emergency Pool, the Reserve Pool, and the additional pounds gained from the loading reduction as a result of lowering effluent limitations for phosphorus in point source discharges (432 lbs.). The Division proposed that the Phosphorus Bank initially contain 0 pounds of phosphorus for immediate trading. The pounds of phosphorus gained from the construction of future nonpoint source projects or the stormwater permit requirements that exceed the minimum phosphorus removal requirement of 50% would be available for trading. The Authority proposed a reversal of the phosphorus pound allocations, with the Reserve Pool containing 0 lbs. and the Phosphorus Bank containing 432 lbs. Discussion of the both proposals by the Commission resulted in a reallocation of 216 lbs. to both the Reserve Pool and Phosphorus Bank. The total annual wasteload allocation for wastewater facilities, industrial process wastewater sources, and developing areas, including the Reserve Pool and Phosphorus Bank, is now 2,360 pounds of phosphorus.

The Commission established a maximum 30-day average effluent limit for total phosphorus for direct discharges at 0.05 mg/l, and this level is significantly less than the previous limit of 0.2 mg/l. This reduction is necessary to make progress towards attainment of the chlorophyll a standard and the technology required to meet the lower concentration is within the economic means of the dischargers. Several types of technology that can meet the limit are well established in Colorado. Facilities that are not capable of meeting the applicable effluent limit immediately will be given a reasonable period of time, not to exceed the allowable date of July 1, 2004, to construct the necessary improvements under a schedule of compliance in their discharge permit.

Section 72.4 has been revised by identifying the area of Additional Prohibitions and Precautionary Measures as a component of future point source phosphorus controls. The revisions identify that the Commission may consider the adoption of future prohibitions or precautionary measures if controls on point sources are not effective in reducing phosphorus loads and attaining water quality standards. Several potential phosphorus point sources in the watershed are identified for possible consideration of additional control in the future. The Commission determined that the identification of these point sources would assist in complying with the TMAL and attaining water quality standards.

72.5 Point Source Wasteload Allocation Modifications

This section of the regulation provides three different mechanisms for adjusting wasteload allocations to point source discharges. Changes to these three subsections are summarized below.

Section 72.5(1) (Temporary Transfer of Phosphorus Allocations) was modified with one minor change. A new subsection (d) was added to provide a mechanism for review of any temporary transfers at the triennial review hearing to determine if permanent changes of the wasteload allocations are necessary.

Section 72.4(6) (Emergency Pool) in the previous regulation was eliminated from the regulation. Since the reservoir is not attaining water quality standards, the Commission determined that an Emergency Pool of phosphorus designed to accommodate exceedances of the point source wasteload allocations of phosphorus was not appropriate. The pounds in the Emergency Pool were added to the Reserve Pool.

Section 72.5(2) (Reserve Pool) provides phosphorus pounds for either new or expanded discharges, or for trading program projects that meet the requirements of the regulation. Point sources are limited to trading from within the Reserve Pool as an additional conservative action under the Phase 1 TMAL approach.

The allocation of total phosphorus to wastewater facilities is limited to 2,360 pounds per year and any increase in wasteload allocation will result in a corresponding decrease in the amount of phosphorus in the Reserve Pool. In the event that the Reserve Pool is fully depleted, increases in a wasteload allocation, outside of a temporary transfer of an allocation from another wastewater facility, can only occur as a result of a hearing by the Commission. The Commission found that the use of the Reserve Pool in this manner is necessary in order to reduce the amount of phosphorus reaching the reservoir.

The Reserve Pool is also the mechanism for providing phosphorus for trades of nonpoint source phosphorus that may be either directly traded and reflected in the appropriate discharge permit, or placed in the Phosphorus Bank as referred to in Section 72.5(3).

Section 72.5(3) (Trading Program) was modified in several significant ways. The program was restricted in several ways in recognition of the fact that the reservoir is not attaining the chlorophyll a standard or the phosphorous target adopted by the Commission in September, 2000. Recent trends indicate deteriorating water quality in the reservoir from the standpoint of phosphorus concentrations, general algal populations and increases in the relative abundance of undesirable blue-green algae.

First, the trading program was modified to preclude the trading of phosphorus from past or future nonpoint source projects funded by the Authority to 216 pounds (which are available for sale by the Authority), and to preclude trading from future nonpoint source projects funded by the Authority and from municipal water supply operations that may incidentally reduce phosphorus loading. Water supply activities that are specifically modified or designed to remove phosphorus beyond the incidental reductions from regular normal operations may be used in the trading program. Only the additional phosphorus pounds removed beyond the incidental reductions may be used in the trading program. The Commission determined that this provision would allow the trading program to create the incentive for more innovative water supply operations that are operated to remove additional phosphorus.

Second, the pounds of phosphorous in the Reserve Pool (formerly in the Trading Pool and Emergency Pool) that were generated through nonpoint source projects constructed by the Authority were removed. The Commission recognized that the benefits of those projects have already been realized by the reservoir, while water quality has continued to degrade. Utilization of those credits by point source discharges would have the effect of exacerbating the present exceedances of standards. The Commission also determined that because the Authority is financed through property taxes and user fees, it should pursue the construction of phosphorus removal projects that are intended solely for the improvement of water quality in the reservoir.

Third, the program was modified to allow trades for only three types of nonpoint source projects. One type of project was designed to provide retrofit enhancements for existing BMPs constructed prior to July 1, 2001, to achieve a higher level of phosphorus removal. A second type will provide BMPs for areas that were developed without providing for these water quality protective features. The third type of trade is aimed at achieving exemplary levels of phosphorus control and reduction in newly developing areas. By virtue of other provisions in this amended control regulation (see Section 72.7), new development is required to provide high level BMPs in line with the requirements of the specific criteria for stormwater permitting included in this regulation. However, it may be possible to remove phosphorous loading beyond these minimum requirements. In order to encourage such approaches in new and proposed developments, the Commission has authorized trades and banking of phosphorus credits subject to the criteria set forth in 72.5(3) for projects that can demonstrate reductions in phosphorus loading greater than a 50% removal efficiency. Phosphorus trading can occur on the increment of phosphorus removed above the 50% threshold. An applicable trading ratio and adjustment factors would apply only to the amount of phosphorus loading removed above the 50% threshold. The Commission determined that providing trading for other types of situations was unwarranted at this time due to the non-attainment of water quality standards.

Fourth, the trading program in 72.5(3)(g) also provides for a minimum trading ratio of two pounds of nonpoint source phosphorus for one pound of point source phosphorus. All trades

will be subject to this minimum trading ratio. The 2:1 ratio is intended to assure that trading assists in making rapid progress toward attainment of the chlorophyll-a standard. This subsection requires that prior to determining the final trading ratio, adjustments must be made to assure that the phosphorus reductions generated from a nonpoint source project that are to be traded for additional loadings from a point source must be comparable in terms of the soluble or particulate form of the phosphorus. Point source discharges are generally high in soluble phosphorus and nonpoint source project-related load reductions to be utilized for a trade to a point source must provide a comparable level of soluble phosphorus removal before the trading ratio would be applied. The Commission was persuaded that soluble phosphorus poses a significantly greater risk to the trophic status of the reservoir than does particulate phosphorus, in part due to the large surplus of soluble phosphorus currently in the watershed. Soluble phosphorus is a more readily available nutrient for algae in the reservoir than is particulate phosphorus.

Additionally, this subsection requires that the fate and transport characteristics of the phosphorus traded from a nonpoint source project are similar or pose a greater risk of impact upon the reservoir than the phosphorus loading to be discharged from the point source receiving the credit. One potential example of the application of the adjustment factors follows:

Total Phosphorus removed by a nonpoint source project=100 lbs.

Of the 100 lbs. 'P'_{tot}, 30% is soluble. The phosphorus discharged from the point source is virtually all in the soluble form. The amount of tradable phosphorus prior to the application of the trading ratio is 30 lbs. The point source discharge and the nonpoint source project site are similarly situated relative to the reservoir (i.e. similar fate and transport characteristics for the soluble phosphorus and no adjustment is needed). After application of the trading ratio the nonpoint source project could generate a 15 lb. credit for the point source.

Generally, when the point source discharge and the nonpoint source project site are similarly situated relative to the reservoir, or the nonpoint source project site is closer to the reservoir than the point source discharge receiving a credit, the conservative assumption is that the fate and transport characteristics for the comparable phosphorus load is similar and that no adjustment is needed. Adjustments based on the fate and transport characteristics of the phosphorus to be traded require the application of scientific professional judgement when the point source discharge is further away from the reservoir than the nonpoint source project location that is generating phosphorus credits. Adjustments must also consider the differences in time of travel and loading rates between surface water sources and groundwater sources of phosphorus. After the adjustment for the form of the phosphorus is made, the phosphorus trading ratio may be adjusted up to 3:1 if the nonpoint source project site is significantly further away from the reservoir than the point source discharge. Similarly, the trading ratio may be adjusted up to 3:1 if the time of travel to the reservoir of the phosphorus removed by the nonpoint source project is significantly longer than the time of travel of the phosphorus discharged by the point source.

Section 72.5(3)(h) has been expanded to require that prior to the Authority approving a trade, certain minimum criteria must be submitted. These criteria are used to determine that the regulatory and technical requirements of the proposal have been met, and then can be used in calculating the amount of trading credits.

The Trading Pool has been recast as Phosphorus Bank in Section 72.5(3)(i) of the revised control regulation. The Phosphorus Bank would allow entities to store pounds of phosphorus or

to credit pounds of phosphorus to other entities. The value, in terms of pounds of phosphorus, of a nonpoint source project constructed by an entity other than the Authority can not be finally determined until it is evaluated in the context of a specific trade. Only in that specific context can the adjustment factors upon the trading ratio be applied properly. When the Phosphorus Bank is utilized to store pounds of phosphorus credited to an entity, the entity retains the rights to utilize the pounds or trade them to another entity. The Commission urged a measure of caution upon those who would intend to bank phosphorous credits for a long period. If necessary to attain the chlorophyll-a standard, future revisions of this control regulation may result in a reallocation or reduction of phosphorous credits from the Phosphorous Bank, as well as from the allocations for point and nonpoint sources in the watershed.

The Commission expects that in cases where an entity has acquired phosphorus credits but no longer has a need for them, the entity will either retire the credits for the benefit of water quality in the reservoir or establish a price for the credits that bears a reasonable relationship to the cost it incurred in obtaining the credits and the value of such credits as reflected by other similar and contemporaneous trades.

Sections 72.5(3)(j) and (l) require that nonpoint source trade credits be retained only if continued performance of phosphorus removal is demonstrated. Projects that are not functioning continually can be removed as an acceptable trading basis.

72.6 Nonpoint Source Nutrient Controls

Section 72.6 previously identified the choice and implementation of nonpoint source BMPs by local governments. Section 72.6 has been revised by identifying the areas of Nonpoint Source Best Management Practices, Public Information and Education, Additional Prohibitions and Precautionary Measures, and Floodplain Preservation Areas And Conservation Easements as components of nonpoint source nutrient controls. The Commission determined that the adoption of these nonpoint source controls will assist in complying with the Total Maximum Annual Load and the attainment of water quality standards for Cherry Creek Reservoir.

The revisions emphasize that Best Management Practices (BMPs) are to be chosen and implemented by entities that are responsible for activities or facilities that cause or are expected to cause nonpoint source pollution. The Authority is to submit a list of nonpoint source projects for construction during the next 3 to 6 years to the Division as a means of demonstrating that reasonable progress is being made to reduce phosphorus loading in the watershed. The projects are identified in the Authority's Cherry Creek Watershed Plan 2000 Appendix M – Stormwater Quality Drainage Plan. The regulation also identifies that responsibility for long-term operation and maintenance of nonpoint source projects by the Authority lies with project owners, with oversight by the Authority. Agricultural and silvicultural BMPs were also recognized, but are restricted based on the prerequisites in the Colorado Water Quality Control Act. The Commission recognizes that individual sewage disposal systems are a contributing source of nutrients to the watershed. Local governments and the Division are to encourage existing individual sewage disposal systems and new development to connect to central wastewater facilities.

The revisions require that a public information and education program be developed and implemented by the Authority. The Commission recognized that public information and education is recognized as an effective means to address nonpoint source pollution impacts associated with rapidly urbanizing areas. This feature will coincide with the information and education features required in the stormwater permitting requirements section.

The revisions identify that the Commission may consider the adoption of future prohibitions or precautionary measures if voluntary controls on nonpoint sources are not effective in reducing phosphorus loads and attaining water quality standards. Several potential nutrient sources in the watershed are identified for possible consideration of additional control in the future.

The revisions identify that floodplain preservation areas and conservation easements be included as a nonpoint source control mechanism. The Commission recognizes that the protection of riparian areas along Cherry Creek and its tributaries will assist in preventing future nutrient loading to the reservoir, and provide greatly needed recreational and aesthetic value to the watershed. The Commission also recognizes the difficulty in quantifying the amount of phosphorus loading reduction from these actions. The results of these nonpoint source control actions should be included as part of the TMAL Margin of Safety factor to facilitate progress towards attaining water quality standards in the reservoir.

72.7 Stormwater Permit Requirements

Non-Point Sources

The revised control regulation includes changes to the section on non-point sources. The original definition of non-point sources included all stormwater runoff. Since the time it was originally promulgated, some stormwater sources are now regulated as point sources. These include most manufacturing, construction sites, and discharges from municipal separate storm sewer systems (MS4s). The definitions have been changed to reflect this distinction, including a definition for 'regulated stormwater'. However, due to lack of data, it was not feasible to separate out the regulated stormwater portion of the waste load allocation that was initially allocated to all non-point sources. This allocation is now designated for the combination of non-point sources and regulated stormwater discharges in the watershed.

Phase II Stormwater Regulations

The stormwater provisions of the regulation are based on several sources. First, the Phase II stormwater regulation as part of Regulation 61 was recently adopted by the Commission. It lists six minimum control measures that the regulated MS4s must implement once they are required to apply for a permit. These requirements are cross-referenced in this control regulation, and include Public Education, Public Involvement and Participation, Illicit Discharge Detection and Elimination, Construction Site Stormwater Runoff Control, Post-Construction Stormwater Management in New Development and Redevelopment, and Pollution Prevention/Good Housekeeping for Municipal Operations. The municipalities with MS4s that drain into the basin will be required to have permit coverage for those discharges that will include developing programs to cover these six measures.

In addition to the basic measures, this control regulation incorporates more detailed requirements under the Public Education, Construction, and Post-Construction Minimum Measures. The provisions of Regulation 61 concerning the six minimum control measures still apply to permittees covered by this Control Regulation. This includes the standard for permit compliance that stormwater management programs reduce the discharge of pollutants to the maximum extent practicable (MEP).

The Public Education additions require a focus on significant sources of nutrients. The additional requirements for Construction and Post-Construction are based on recommended procedures outlined in the Authority's Cherry Creek Reservoir Watershed – Stormwater Quality

Model Ordinance, Revised Version April 19, 2001. In the control regulation, the procedures are mandatory rather than recommended.

The Model Ordinance contains extensive detail when describing the BMPs and other requirements. The control regulation includes the major elements, but not the extensive details. The Division will include many of these detailed requirements in the general permit.

The Model Ordinance was reviewed by the Division and compared to the control regulation stormwater requirements. With the exception of specific issues addressed below, it was determined that a MS4 stormwater permittee required to comply with Section 72.7 that adopts the Model Ordinance as an enforceable program will be in compliance with the requirement in Regulation 61 to develop construction (Section 61.8(11)(a)(ii)(D)) and post construction ((Section 61.8(11)(a)(ii)(E)) programs, as well as the Sections (72.7.2(b) and 72.7.2(c)). The Commission's acceptance of this version of the Model Ordinance is in no way intended to relieve MS4s that adopt the Model Ordinance from the additional requirements in Regulation 61 to implement and enforce their programs. To the extent required in Regulation 61 and this control regulation, this includes, but is not limited to, developing procedures and regulatory mechanisms for:

1) requirements for construction site operators to control wastes (61.8(11)(a)(ii)(D)(II)(c));
2) site plan reviews (61.8(11)(a)(ii)(D)(II)(d);
3) receipt and consideration of information submitted by the public (61.8(11)(a)(ii)(D)(II)(e));
4) inspections of construction sites and enforcement of control measures (61.8(11)(a)(ii)(D)(II)(f)),;
5) a program to designate industrial and commercial facilities for additional post construction BMPs (72.7.2(c)(7)(i)),;
6) procedures to ensure long-term operation and maintenance of post-construction BMPs (61.8(11)(a)(ii)(E)(II)(c)); and
7) enforcement (61.8(11)(a)(ii)(D)(I) and 61.8(11)(a)(ii)(E)(I)).

Specific requirements of the control regulation that still must be addressed outside of the requirements in the Model Ordinance include the following:

1) The Model Ordinance does not include requirements found in 72.7.2(b)(5)(ii)(B) to require temporary seeding year round when practicable and permanent seeding when areas will remain disturbed for an indeterminate time. The MS4 may adopt these requirements subject to the allowable variances in 72.7.2(b)(5)(ii)(B)(III).
2) The Model Ordinance does not include a requirement for the MS4 to require construction sites to be inspected at least every 14 days (72.7.2(b)(5)(iii)(A)(I)).
3) The Model Ordinance does not address the need for BMPs to prevent pollution, contamination, or degradation of all state waters, therefore requiring at least a certain level of stormwater BMPs prior to discharge into state waters.
4) The Model Ordinance includes language indicating that use of specific BMPs listed in section 72.7.2(c)(6)(ii) and 72.7.2(c)(8)(i) is optional. These BMPS are required by this Control Regulation unless an alternative BMP is approved as allowed for in the same sections.

These modifications could occur when the Model Ordinance is adopted by the MS4, or at least by the permit deadline in the first term of the MS4's municipal stormwater permit, in order to comply with Regulation 61 and this control regulation.

In addition, the Division maintains the right to require additional measures from MS4 permittees if needed to comply with the requirements of Regulation 61, this control regulation, or other State requirements.

The regulation does not include a reference to any standard manuals for specifications on BMPs. However, it is expected that all BMPs used for permit compliance will adhere to established engineering standards, such as are used in the Urban Drainage and Flood Control District's Volume 3.

The Commission promulgated these stricter requirements due to the issue of phosphorus loading in the basin. The more detailed requirements are for BMPs that, in most cases, directly or indirectly impact the amount of phosphorus entering state waters.

The procedures under Construction and Post-Construction in the Model Ordinance were incorporated into the control regulation with some changes. The most significant ones are as follows:

-the organizational structure was changed to increase flexibility on the part of the MS4;
-the MS4 was given the option of allowing additional exclusions from the program requirements, although some additional exclusions may require Division approval;
-the list of required BMPs was included, but the MS4s were given the option of limiting the list;
-the MS4s were also given the option of including additional and/or alternative BMPs if they have been shown to have similar nutrient removal capacities;
-the section on Post-Construction requirements at industries was changed to clarify that the MS4 has the ability to designate commercial or industrial sectors with a high pollution potential as requiring compliance with Post-Construction measures; and
-for the requirements of the post-construction minimum measure, BMPS must be required prior to discharge to state waters in compliance with Regulation 61 to protect the water quality of all state waters, including those between the site of development/redevelopment and Cherry Creek Reservoir. However, the additional requirements for control of phosphorus in Cherry Creek Reservoir, which go beyond those in Regulation 61, may be addressed through regional facilities located after the stormwater has discharged into state waters, but prior to discharge into Cherry Creek Reservoir.

As in the development of the Post-Construction measure in Regulation 61, concerns have been raised regarding the word 'ensure' in this section under the control regulation. The standard for permit compliance for MS4 stormwater permits is that municipalities ensure maintenance and operation of BMPs to the maximum extent practicable (MEP). In determining if an MS4 has complied to the MEP, the Division may consider such factors as the adequacy of the MS4's post-construction program, its ability to require that the necessary actions be performed by the responsible parties, how the MS4 has carried out the post-construction program, and, if necessary, the MS4's ability to provide appropriate mechanisms to ensure such maintenance and operation. The specific issue has been raised dealing with the extent of the legal ability of certain public entities, such as special districts, to adopt or implement certain requirements of this regulation and Regulation 61 due to their lack of land use approval authority. The Commission does not believe it would be prudent to create an express exemption from all regulatory requirements for such entities. The Commission intends that the Division will make such determinations on a case-by-case basis under the "MEP" standard as part of the application review process, or when drafting the MS4 permit, taking into consideration the legal authority of the applicant in light of each relevant program requirement. If handled within the

permit, liability for portions of the minimum control measures may be removed from some MS4s that do not have legal authority for implementation if another MS4 is covering those portions with a qualifying program.

It is expected that the MS4 will put into place procedures, ordinances or other regulatory mechanisms that will require, to the extent allowed by State and local law, that BMPs be appropriately designed and planned, and provide for enforceable operation and maintenance by the owner/operator. Factors such as the extent of the inspection/verification system, and the procedures in place and implemented for instances when BMPs are not operated and/or maintained, can be evaluated by the State to determine if the MS4's program meets the MEP standard. Facilities such as special districts that may operate regional stormwater facilities under Intergovernmental Agreements with their respective municipal or county governments are expected to include provisions in those agreements for county municipality assistance in abiding by any regulatory and permit requirements that may be beyond their own statutory authority.

Area of Stormwater Permit Coverage

Many of the MS4s affected by the control regulation have discharges both into and outside of the watershed (i.e., into other drainages). The more detailed requirements in the control regulation will only apply to the discharges into the watershed. MS4s have the option of applying them jurisdiction-wide, but this will not be a requirement.

Basin Authority's Permit Status

The question was raised as to whether or not the Authority itself would require permit coverage under the Phase II stormwater regulation. As per the federal regulation, the Authority does meet the definition of a municipality. The question then becomes, does the Authority have a storm sewer system, as defined in Regulation 61. The Division has determined that at this time, the Authority does not own or operate an MS4. However, if circumstances change, the Division reserves the right to require the Authority to apply for permit coverage.

72.8 Nutrient Monitoring

The control regulation previously included a section for monitoring of phosphorus from both point sources and nonpoint sources in the Cherry Creek Basin (Section 72.7). The purpose of the monitoring program was to determine phosphorus loadings from point sources, and phosphorus removal efficiencies of nonpoint source controls.

Section 72.8 has now been revised to encompass monitoring of nutrients, rather than only phosphorus. In the past, the main emphasis of watershed studies related to nutrient transport has been on the development of monitoring programs that provide information on total annual transport of phosphorus at various points along the main stem of Cherry Creek, and monitoring of trophic-state variables for Cherry Creek Reservoir. This section also has been expanded to identify the roles of the Authority, the Division, and other agencies in developing monitoring plans. The Commission decided that the monitoring program should continue as expanded, and include an emphasis on nitrogen as well as phosphorus.

Section 72.8 now includes the development and implementation of special studies, in addition to routine monitoring. Monitoring by itself is insufficient as the sole basis for a long-term program whose objectives are to document the validity of mass transport and reservoir trophic state modeling, and to identify environmental mechanisms that have an effect on water quality. The Commission agreed that routine monitoring will be combined with special studies having one or more specific objectives involving information that cannot be obtained from routine monitoring.

72.9 Reporting

This section previously required reporting on control of nonpoint sources and monitoring of phosphorus to the Commission under three separate sections. The revisions have combined all reporting requirements into Section 72.9. The revisions require an annual report with specific information on point and nonpoint source controls, wasteload allocations, trading program, and other activities related to complying with the TMAL and attaining water quality standards. The Division and Commission will use this information in assessing the progress of the Authority.

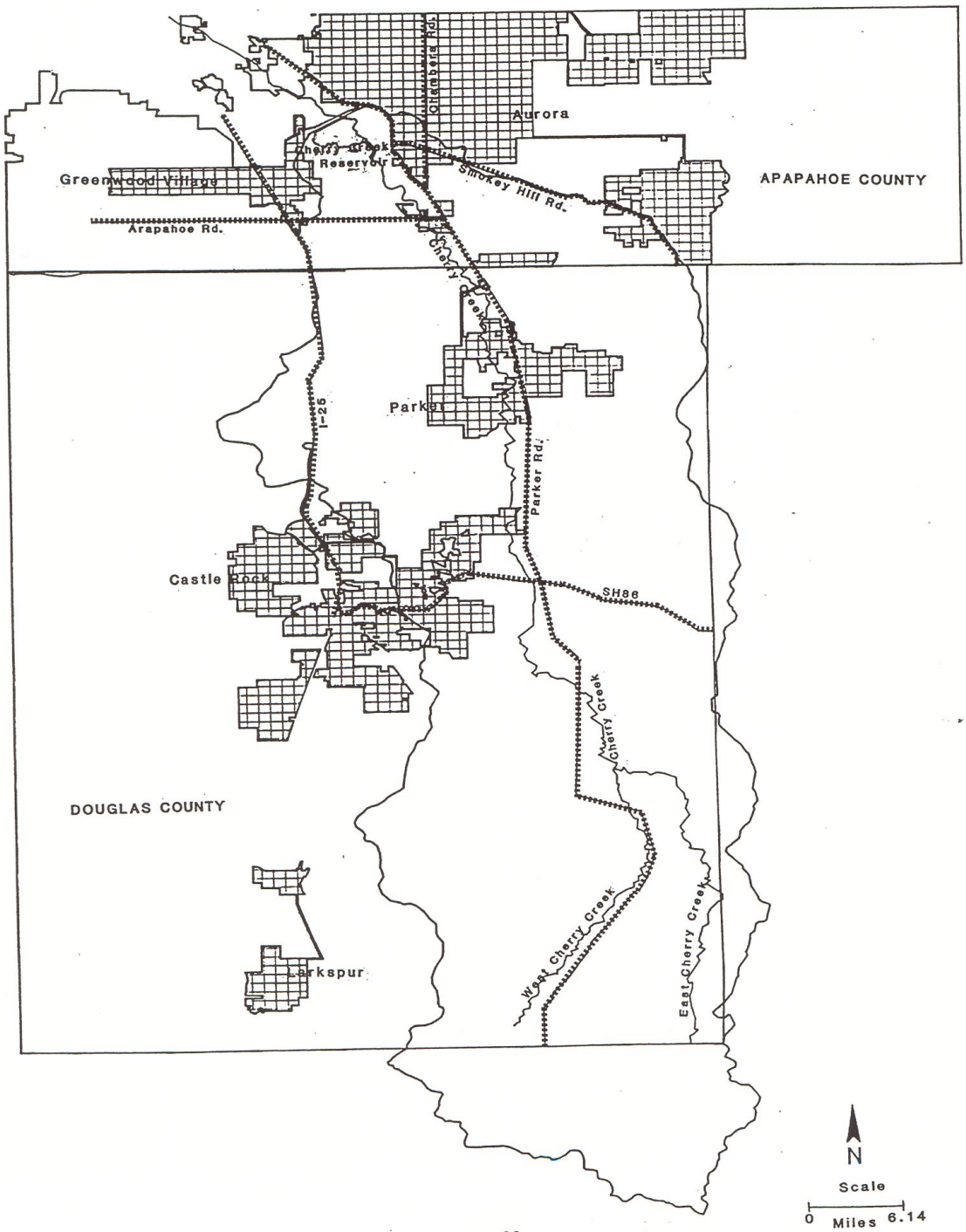
72.10 Commission Review

This section previously required an annual report to demonstrate progress towards control of nonpoint sources. The revisions require a report at each triennial review on the progress of point and nonpoint source controls and effects on the reservoir. Recommendations can be made to the Commission at this time, and the Commission can adjust the TMAL load allocations, the Trading Program, and other requirements to assure that progress is being maintained.

PARTIES TO THE RULEMAKING

1. The Cherry Creek Basin Water Quality Authority
2. The City of Greenwood Village
3. Roxborough Park Metropolitan District
4. Plum Creek Wastewater Authority
5. Colorado Division of Wildlife
6. Arapahoe County Water & Wastewater Authority
7. The City of Thornton
8. Denver Regional Council of Governments
9. Clean Water Action
10. United Citizens of Arapahoe Neighborhoods
11. Chatfield Watershed Authority
12. U.S. Environmental Protection Agency, Region VIII
13. The City of Westminster
15. Sierra Club
16. Warm Water Coalition
17. Cherry Creek State Park
18. Colorado Trout Unlimited

CHERRY CREEK BASIN



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